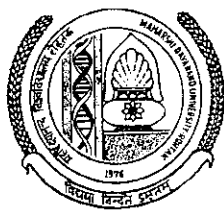


Accounting Theory

M.Com. (Final)

Paper-8



**Directorate of Distance Education
Maharshi Dayanand University, Rohtak**



Accounting Theory

Paper-8

M. Com. (Final)

**Directorate of Distance Education
Maharshi Dayanand University
ROHTAK – 124 001**

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ROHTAK - 124 001

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Accounting Theory

Paper-8

Max. Marks.: 100

Time 3: Hrs

Note: There will be three sections of the question paper. In section A there will be 10 short answer questions of 2 marks each. All questions of this section are compulsory. Section B will comprise of 10 questions of 5 marks each out of which candidates are required to attempt any seven questions. Section C will be having 5 questions of 15 marks each out of which candidates are required to attempt any three questions. The examiner will set the questions in all the three sections by covering the entire syllabus of the concerned subject.

Course Inputs

- Unit-1 Fundamentals:** Meaning, Need Nature, Classification, Evaluation, Role and Users of Accounting and Accounting Theory, History of Accounting Thoughts. Approaches to Accounting Theory. Accounting Postulates, Concepts and Principles.
- Unit-2 Income Measurement:** Concepts of Income Revenues, Expenses, Gains, losses, Assets, Liabilities and Equity. Depreciation Method, Depreciation and Indian Companies Act, Inventory: Inventory Coating methods. AS-2 on valuation of Inventories.
- Unit-3 Corporate Reporting:** Financial Reporting: Concept and development of Financial Reporting (including True blood Report, The Corporate Report, FASB Concept No. 1, Stamp Report). Specific Issues in Corporate Reporting: Segment, Social and Interim Reporting. Harmonization of Financial Reporting (including IASCs Guidelines.)
- Unit-4 Contemporary Issues in Accounting:** Accounting for Changing Prices, Human Resource Accounting. Financial Engineering (A Multi-disciplinary Approach to Risk Return Management)
- Unit-5 Accounting Standards:** Formation, Meaning, Benefits and Management of Accounting Standards, Process of Standards setting in India, U. K. and U.S.A. Elementary knowledge of Indian Accounting Standards. Lease Accounting Social Accounting.

Chapter-1

Accounting - An Introduction

Accounting is generally termed as the language of business throughout the world. The language is the means of communication of ideas or feelings by the use of conventionalised signs, gestures, marks and articulated vocal sound. In the same way, the accounting language serves as a means to communicate matters relating to various aspects of business operations. As the individual business enterprises keep their accounting records separately, the offer to communicate is essentially from a business enterprise to various individuals, groups and institutions that are having interest in the operations and results of that enterprise. Now, although accounting is generally recognised with the business, trade and profession, the business enterprise is not the only kind of organisation that makes use of accounting. Legal entities ranging from individual to governments use and prepare accounting to obtain information on the financial condition and performance of the entity in question. Just as the business enterprises (like firms, companies, societies and institutions keep their accounts, so can the nations and even the individual owners of the business and profession entities.

It is necessary to have a good knowledge of accounting-grammar (in the shape of construction of accounts, conventions, concepts, postulates, principles, standards etc.) to interpret accounting information for purposes of communication, reporting, decision making or appraisal.

Definition of Accounting

The role of accounting then is that of communicating the results of the operations of a business. How does accounting accomplish this? This is best understood by commonly accepted definition of accounting: "Accounting is the art of recording, classifying and summarising in a significant manner and in terms of money, transactions and events which are, in part at least, of financial character and interpreting the results thereof. (AICPA)"

The art of *recording* involves putting into writing or in print the transactions of financial character, reasonably soon after occurrence, in the records maintained by the company e.g. cash book, day books, journals, memoranda books, etc. This part of accounting is essentially concerned with not only ensuring that all business transactions of financial character are in fact recorded but also that they are recorded in an orderly manner. For example, when a business executive has to travel in connection with his work, he will ask the cashier in the company's accounts department to advance funds for meeting his travel expenses. On receipt of the memo from the executive, the cashier will prepare a voucher, hand over the cash to the executive against his signature acknowledging receipt of the cash advance. This transaction will then be appropriately recorded in the cash book and the "travel advances" account of the ledger. When the executive returns from the business trip, he will prepare a statement of his travel expenses (usually called Travel Allowance Bill or T.A. Bill), get it approved by his superior (if required by the regulations in this regard), and send it on to the accounts department. If he has spent less than the amount originally advanced, he will return the balance amount in cash along with the travel statement. The accounts department, after verification of the statement to ensure that the expenditure is in conformity with prescribed regulations will make appropriate entries in the cash book and other accounting records and suitably adjust the "travel advances" account. If the amount spent is greater than the original advance, the balance amount will be paid to the executive and the required entries will be made in the accounting records.

The art of *classifying* is concerned with the systematic analysis of the recorded data so that items of like nature are classified under appropriate heads. This accounting classification is usually done by maintaining ledgers with individual account heads under which all financial transactions of a similar nature are collected. For instance, continuing with the earlier illustration, the original advance will be classified by entries in the cash book (or cash account) leading to a reduction of cash held by the company and in the "travel advances" account in the ledger, thereby increasing the amount of such advances outstanding. On receipt of the travel expenses statement, the balance amount of cash, received from or paid to the executive (as the case may be), will be entered in the cash book the "travel advances" in the ledger will be reduced by adjustment of the accounts rendered and the "travelling expenses" account in the ledger will be posted with the amount by way

of accounting of such expenses incurred in connection with the operations of the enterprise. In the process, the events of the original cash advance and the subsequent incurrence of travel expenses are classified under three relevant heads – namely, cash account, travel advances account and travelling expenses account.

The art of *summarizing* in a significant manner consists of presenting the classified data in a manner which is useful to the internal and external end-users of accounting statements. At the end of stipulated periods (usually a month for internal purposes and a year, for external reporting purposes as required by corporation law), the accounts in the ledger will be balanced as at the end of that period. The accountant will check (or “try”) the accuracy of the accounts by preparing a trial balance of all ledger accounts as at the end of that period. This process leads to the preparation of financial statements like the Balance Sheet, Income Statement (or Profit and Loss Account as it is often called), Source and Application of funds statement, cost statements, internal reports to management, etc.

The final function of accounting is the *interpretation* of the summarized data in such a manner that the end-user can make meaningful judgements about the financial condition or the profitability of the business operations or can use the data in preparing future plans and laying down policies to execute such plans. After the monthly accounting statements for internal purposes have been prepared, the chief accountant or controller will prepare analytical notes appraising the performance of the enterprise and its various units or departments (as reflected in the accounting statements prepared) in relation to the expected performance and highlight areas of shortfall in performance so that management can take appropriate remedial action for overcoming such shortfalls. Similarly, in respect of the annual statutory accounts, the accountant will prepare a note analyzing the results of operations for the year for the consideration of the Board of Directors. Thereafter, the directors will include their comments analysing the results reported in their report annexed to the final-accounts of the year.

There is no single or unanimously accepted definition of accounting. Why ?

Generally, definition either formally or informally specifies the meaning of a phenomenon or object in question. A definition sets boundaries to a phenomenon or subject indicating not only what it is, but also what it is not. A definition answers questions like, “What are its features ? What is its history or what does it do and how is it related to other phenomenon ?” Very often definition depends on our purpose or intention with the given matter. Accordingly, definition of accounting is bound to “come closer to our own interpretation of the scope of accounting, and the manner in which we would like to treat its subject matter”. In a rapidly changing socio-economic conditions the subject matter of accounting is also changing. Accounting which initially began as the art or science of record-keeping, is moving towards adoption of a dynamic role which also emphasises its social goal. This is clearly evident from some of the definitions presented below :

- (i) **Accounting as a record keeping device** : The definition of the American Institute of Certified Public Accountants highlight record-keeping as an essential attribute of accounting. Accordingly “Accounting is the art of recording, classifying and summarising in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character, and interpreting the results thereof.”
- (ii) **Accounting as an information system** : The definition of the American Accounting Association highlights communication aspect of accounting for decision-making by a wide variety of users. This user-oriented definition of accounting “refers to the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information”.

To Robert Sterling, accounting stands for a measurement communication process. According to him, “Accountants ought to measure something and then communicate the measurement to the people who will make the decisions. Under this interpretation, the outputs of the accounting system are the inputs to decision theories”.

- (iii) **Accounting as a service activity** : A later definition of the Accounting Principles Board of the AICPA endorses the views of American Accounting Association about the elements of decision making embedded in accounting : “Accounting is a service activity. Its function is to provide quantitative

information, primarily financial in nature, about economic entities that is intended to be useful in making reasoned choices about the alternative course of action."

W.A. Paton, however, attempts to elicit a definition of accounting from the structural viewpoint "Accounting is a synthesis of concepts, rules and techniques designed to facilitate understanding and control of economic activity."

- (iv) **Accounting as a dynamic social science** : According to Glautier and Underdown, accounting is a social science. They observe that "The history of accounting reflects the evolutionary pattern of social developments and in this respect, illustrates how much accounting is a product of its environment and at the same time a force for changing it. There is, therefore, an evolutionary pattern which reflects changing socio-economic conditions and changing purpose to which accounting is applied".

The Nature of Accounting

Accounting in its essence is a function that aims to accumulate and communicate information essential to the understanding of the activities of an entity. It is an abstraction of the real world economic events. The distinctive nature that makes accounting a unique system is as follows :

- (i) **Accounting as a process** : Accounting is a process which involves gathering, compacting, interpreting and disseminating economic information in a systematic way.
- (ii) **Stewardship function** : Accounting is a stewardship function. Its basic goal is to report on the resources and obligation of the entity to the owners. Through the medium of financial statements it communicates to the interested parties of the contributions and relative rights of the economy segments— the shareholders/owners, creditors and others.
- (iii) **Concepts and conventions** : Since accounting is a process that aims at communicating economic information, it must rely on a set of previously agreed concepts, conventions and rules. These rules and conventions are not discovered but they are contrived and mutually agreed upon.
- (iv) **Accounting as a means to an end** : Although accounting system is characterised by a host of rule-procedures and conventions, they are not the end by themselves. The ultimate end of accounting is to provide external information-communication system by gathering, compacting, interpreting and disseminating economic data which gives a financial representation of the relative economic rights and interests of the economy segments, in order to facilitate judgement formulation and action taking by its users.
- (v) **Accounting as an art** : Accounting is more of an art than a science, its logical foundation is not deeply embedded in scientific or natural law. It is essentially and fundamentally utilitarian in nature, therefore, its methodologies are primarily based on expediency and upon actual day to day needs of the business community.

Functions of Accounting

Accounting being an indispensable part of business system, it is important to delineate precisely its functions. But unfortunately the accountants are not unanimous about the exact functions of accounting, neither is there any authoritative pronouncement that can remove disagreement about the probable functions of accounting.

D.R. Scott observed that accounting has three major functions to do. These are record-keeping function, the control function and the protection of equities function ? Maurice Moonitz, however, defines accounting in terms of five basic functions of accounting. According to him, "The function of accounting is (1) to measure the resources held by specific entities; (2) to reflect the claims against and the interests in those entities; (3) to measure the changes in those resources, claims and interests; (4) to assign the changes to specifiable periods of time; and (5) to express the foregoing in terms of money as a common denominator"

A.C. Littleton on the other hand, identifies six areas of "accounting actions". These are : (i) homogenising diverse events; (ii) converting events into entries; (iii) classifying entries into accounts; (iv) reclassifying account data into fiscal periods; (v) summarising and reporting periodic data; and (vi) reviewing accounting data and processes. Elsewhere, Littleton states that "accounting has one function—to furnish dependable, relevant information about business enterprise."

Although diverse opinions have been expressed above about the functions of accounting, the most common perceptions about the functions of accounting are as follows :

- (i) **Recording function** : According is essentially a recordkeeping function of the past, present and future economic events of the business. The recording function involves techniques of information gathering and processing.
- (ii) **Summarising function** : The next important function of accounting is summarising diverse economic data into homogeneous group or unit called account. It is most important function of accounting since just like our language system, accounting communicates economic information to its users through these accounts.
- (iii) **Accounting as a medium of communication between the firm and the external parties**: Accounting is not an end in itself, but it exists to serve a purpose. The purpose is to supply reliable and dependable information about the economic chronicles of the business for the purpose of decision making by the interested parties.
- (iv) **Income determination** : "Net income determination under the historical cost method lies at the heart of the whole accounting methodology, "says Campfield" Income is the basic measure that provides information about the periodic progress of business. It also provides the basic rationale for being in business.
- (v) **Preparation of balance sheet** : Balance sheet is very often stated as a statement of financial condition that purports to show the economic resources, obligations and owner's equities of the business at periodic interval of time. Some views however, consider it as a mere statement of balances of the unallocated costs that has not been assigned to the income statement. Despite difference of opinions about the exact nature of balance sheet, accountants have found its preparation extremely useful.
- (vi) **Control function** : Accounting is a special type of calculative service that comes handy to the management for the purpose of exercising control over many functional areas of business.
- (vii) **Compliance with legal requirements** : In modern days accounting is not merely an act of prudence to exercise control, but its necessity arises from the need of compliance with many legal requirements. For example, the provisions of the Indian Companies Act makes it obligatory for every company to prepare a statement of profit and loss and balance sheet at the end of each accounting period.

Objectives of Accounting

Although the terms, definition, function and objective are very often used interchangeably there is presumably a distinction among them. As stated earlier, definition describes what a thing is, while function describes what it does and objective, describes what it intends to do.

Thus, when we speak of objective, we rationalise the thinking process to formulate a set of attainable goals, with reference to the circumstances, feasibility and constraints. Deciding about the objectives of accounting, therefore, requires perceptions about the environment in which accounting system works. "The environment of accounting has a direct bearing on the objectives of accounting and on the logical derivation of principles and rules."

The accounting environment generally comprises the firm (*i.e.*, the entity which prepares financial statements), different groups of external users and the existing legal and economic environment. The feasibility and constraints imposed by the accounting environment provides the boundary of accounting objectives.

Evolution of accounting objectives : Accounting as we see today was not certainly the same when it began. Its techniques and methodologies have changed through as evolutionary process. The same is true about the objectives of accounting.

The system of double entry accounting can be traced back to at least 13th century when it began as an outgrowth of record-keeping function that made possible orderly and organised record of past activities

of the business. But over the years it has turned out to be an important mechanism to accumulate and communicate economic information essential to the understanding of the activities of an enterprise in its social set up. Today, accounting is widely regarded as an information system with an objective of effective transmission of information revealing past, present and prospective socio-economic activities of business to a wide spectrum of users.

But at the first instance, the basic objective of accounting is to render stewardship services to the owners. This purpose has become all the more important with the diffusion of ownership in corporate business that separated ownership from management. In consequence, stewardship function has become predominant over record-keeping. The managers of the business as steward are responsible for protecting the interests of the owners as well as the assets of the business. The basic objectives of accounting in such cases are

- (i) To measure the resources held by the entity,
- (ii) Protection of equities, i.e., to measure the claim against those resources by the owners and outsiders, and
- (iii) To measure the results and financial condition of business.

Notwithstanding this, accounting may pursue many other goals that may arise from the specific information needs of the owners/managers for the purpose of management control and meeting legal requirements. Since the middle of the present century, however, a shift of emphasis of accounting objectives have begun. Increasing legal control and wide-spread public interests in corporate business have broadened the scope and objective of accounting. This is clearly manifest in the APB statement No.4 which entails an elaborate list of objectives of accounting. The APB's list of objectives marks a substantial departure from the trend of the contemporary accounting literature which had never given significant attention to why accounting was done. APB's objectives of accounting may be broken into two distinct aspects—the general objectives and the qualitative objectives.

The general objectives of accounting according to the APB are :

- (i) To provide quantitative financial information about a business enterprise that is useful to the users, particularly the owners and creditors, in making economic decisions.
- (ii) To provide reliable financial information about economic resources and obligations of a business enterprise.
- (iii) To provide reliable information about changes in economic resources of an enterprise that result from its profit directed activities.
- (iv) To provide other needed information that assists in estimating the earning potential of the enterprise.
- (v) To provide other needed information about changes in economic resources and obligation
- (vi) To disclose, to the extent possible, other information related to the financial statements that is relevant to the user's needs.

The qualitative objectives of accounting, according to the APB are : (i) relevance, (ii) understandability, (iii) verifiability, (iv) neutrality, (v) timeliness, (vi) comparability, and (vii) completeness.

A notable feature of the APB's objective of accounting is that it could not transcend beyond the stewardship objective. The true blood Committee Report on "The Objectives of Financial Statements" which was published in 1973, however, went beyond the traditional orientation of accounting toward reporting on stewardship. The committee emphasised on providing investors and creditors with information "for predicting, comparing, and evaluating potential cash flows to them in terms of amount, timing and related uncertainty." The committee also emphasised the social objectives to accounting stating that "An objective of financial statements is to report on the activities of the enterprise affecting the society which can be determined and described or measured and which are important to the role of the enterprise in its social set up".

Users of Accounting Information

(1) External Users

In order to understand the communication process, we might ask ourselves who are the people interested in the operations of a business enterprise. There are several entities outside the business (or in other words, external to it), which are interested in its operations because of their business dealings with the enterprise. There are individuals or organizations who have economic transactions with the business, e.g. suppliers of goods and services on credit, banks or financial institutions lending money either for a short or a long period, buyers of goods and services produced by the enterprise on the basis of stipulated targets, contractors who have undertaken to build plants and buildings and other facilities for the business. They are all interested in varying degrees in the operations of the businesses with which they deal in order to determine whether the enterprise is credit worthy and the terms under which credit can be extended, i.e. the amount of goods or services that can be sold on credit (or the loans that can be advanced), the period of such credit and the likelihood that the debt arising out of the transactions would be repaid in time.

The external group is by no means limited to such individuals or organizations who have economic transactions with the business. *Regulatory agencies*, i.e. government departments or other agencies who are charged with the responsibility for regulating general business activity or particular types of business are also naturally interested in the operations of the business. Some of the government departments having general interest, in the Indian context, are the Company Law Board, Registrar of Companies, Income Tax Department, Ministry of Industrial Development, Ministry of Foreign Trade, etc. Government organizations looking after particular product groups are Ministries of Steel, Petro-chemicals, Agriculture, Health, etc. as also officials and bodies designated for overseeing particular activities like Drugs Controller, Cost and Prices Bureau, Tariff Commission, etc. Some of the government departments are specifically charged by law to regulate the operations of a particular group of companies, e.g. the State Electricity Boards. The interest of the regulatory agencies is essentially to ensure that the enterprise :

- (a) complies with the requirements of the law relating to financial transactions, e.g. it pays the required amount of tax, does not overtrade on its capital, pays dividends to its shareholders out of the profits, provides depreciation according to prescribed norms, etc;
- (b) discloses its capital, retained earnings, profits, sales and costs to the public at large so as to submit its activities to public scrutiny;
- (c) provides data relating to its borrowings (and the assets charged or mortgaged for raising such loans) so that future lenders are provided with the required information regarding the present level of borrowings and the state of the security provided by the assets, etc.

Obviously, the balance sheet and the income statement prepared in consonance with the requirements of the disclosure provided in the law would be of great help to the regulatory agencies in these matters.

The third category of external users consists of those who have neither any economic transactions nor are concerned with regulation of business activities but are interested in the operations of the business on behalf of constituents which they represent, i.e., *as representatives of external interests*. In this category can be included labour unions, stock brokers, chambers of commerce, trade associations export agencies, etc., These bodies would like to ensure that their members' or clients' interests are safeguarded in terms of the required degree of financial viability of the enterprise with which they deal or that the revenue costs and profits of the enterprises are disclosed fairly so as to enable their members or clients to determine accurately, in financial terms, the quantum of economic transactions, for instance, bonus to be paid to the members of a trade union or dividends to be paid to investors.

In other circumstances, a person or a body might be interested in the results of the operations of a business for determination of claims or resolution of disputes, e.g. a court deciding upon the ownership of shares as between two claimants or judging the merits of a claim against a business in liquidation, an arbitrator

settling a dispute between a business organization and the suppliers of goods and services to that business or a tax tribunal assessing a claim of a business enterprise for income tax relief.

Lastly, the external group would include, on the one hand, the *auditor* of the business who is required by law to certify the accounts and, on the other, the prospective shareholders who wish to subscribe for shares of a business enterprise or want to buy an already-issued share from another shareholder. Other persons who would be interested in the business, even though they may not be directly concerned, are the business economists analysing the business enterprise's success or the *financial press* providing information to their reader regarding the operations of the business world.

Internal Users of Accounting Information

It is not difficult to conclude that the internal people who would be most interested are the owners of the business. The owners are proprietors in proprietary concerns and the partners in partnership businesses, while in the case of a company (or corporation, as it is sometimes called) the legal owners of the company are the shareholders. Shares may be held by individuals or companies or corporations or even the government. Clearly, the owners would like to know :

- (a) whether the enterprise made any profit during the period reported and if so, what the dividend prospects are ;
- (b) whether the financial condition of the enterprise is sound as reflected in its capital to retained earnings ratio, current assets to current liabilities ratio, funds flow statement, etc.;
- (c) whether these operations are profitable in terms of return on funds invested or return on assets, profits per rupee of sales, gross margin per unit of sales, etc.;
- (d) whether the growth of its sales are in line with the expectations of the shareholders;
- (e) whether its costs are in line with the volume of sales and norms of costs in similar enterprise elsewhere.

There might be individual shareholders who are interested in greater financial details relating to the operations of a company, but the average shareholder would expect to find answers to the questions set out above in the balance sheet and the income statement prepared by the enterprise for purposes of external reporting.

However, the owners are not the only persons within the company (or the internal group) who are interested in the various aspects of the operations of a business. With the separation of management and ownership, managers at various levels beginning from shop floor superintendent to the Chairman and Chief Executive, are also interested in the business. Some of their needs for accounting information relate to :

- (a) setting up targets for future periods, usually the next financial year;
- (b) measuring the performance of the various units of the business as also the enterprise as a whole;
- (c) evaluating the performance in relation to the targets set up;
- (d) highlighting the areas of shortfalls from planned performance; and
- (e) taking remedial action for overcoming such shortfalls.

Most of this information would be financial in nature and would essentially be prepared from the accounting records. However, it would require special knowledge and skill to assemble the data and to present them in meaningful terms for resolution of the managerial problems outlined above.

The last category of persons belonging to the internal group who are interested in ascertaining the financial condition of the companies for the resolution of their problems are the employees of the business.

What are some of the things in relation to the operations of a business which would be of interest to an end-user? The external end-users would essentially be interested in the determination of financial position and profitability, while the managers of the enterprise (or internal end-users) would emphasise the development

of data for performance appraisal, decision making and planning. Accordingly, the more important uses of accounting relate to development of information for providing answers to questions like :

- (i) How good or bad is the financial condition of the business, generally ?
- (ii) Have the operations of the business as a whole resulted in a profit (or surplus) or a loss (or deficit) ?
- (iii) How well have the different functions or departments performed and how successful have been the results of individual activities or products ?
- (iv) What are the likely results of new decisions to be made or old decisions which are to be modified ?
- (v) In the light of the past results of operations, how should the business enterprise plan its future activities to achieve expected results ?

Scope of Accounting

Accounting is a highly organised and integrated discipline, the usefulness of which have been found in diverse areas of socio-economic activities. Although, accounting basically started as a device for recording economic events by the business enterprise in the pursuit of its profit motive, the scope and method of the discipline lend itself to wide social application. The basic orientation of the discipline being information communication it can be applied to the measurement and communication of data revealing past, present and prospective socio-economic activities to improve control methods and decision-making at levels of socio-economic activities. Thus, accounting as the measurement and communication of social data is ubiquitous, always playing a constructive role. The tools and techniques of the discipline can be used in a diverse field of human activities that require some sort of evaluation. It can be used to deal with any organisational unit, whether business, Governments, nations or individuals and it can be concerned equally with the measurement of the flow of socio-economic activities, whether or not expressed in financial terms. It is thus possible to apply the techniques of accounting to the basic areas of social interests such as national income accounting, human resource accounting, to identify and measure data about human resources for the purpose of communication of information to the interested parties, and socio-economic accounting that may encompass community involvement of the business, physical resources and environmental contributions and product and service contribution.

Accounting Cycle

Accounting involves maintaining records of financial transactions of an entity which can be either a business or non-business enterprise, and periodically reporting the results of operations and the financial conditions of the enterprise to various interested parties. The sequence of accounting procedures to accomplish the recording and reporting of the transactions is often described as accounting cycle.

The accounting cycle consists of the following steps :

- (1) **Documentary evidence** : It is the basis of recording a transaction e.g., a purchase invoice for recording purchases.
- (2) **Journalising transactions** : It is the recording procedure under double entry book-keeping.
- (3) **Posting to the ledger** : It is the process of transferring transactions into various 'accounts'. An account is the basic unit of accounting that classifies diverse economic events into a homogeneous group.
- (4) **Balancing of accounts** : Accounting is essentially aggregative in nature. The classification of transactions into homogeneous groups, called 'accounts' involve offsetting the positive flow against the negative flow of benefits. The remainder is called the balance of the accounts.
- (5) **Preparation of trial balance** : A trial balance is the list of the balances of accounts arranged according to debits and credits such that the aggregate of the debit balances equals to the aggregate of credit balances. This is an apparent proof of the arithmetical accuracy of the balances of the accounts.

- (6) **Adjusting entries** : Adjusting entries are the post trial balance operations which involve allocation of various items of revenues and expenses to the appropriate time period or operations for proper matching, e.g., depreciation adjustment, stock adjustment, etc.
- (7) **Preparation of final accounts** : The last stage in the accounting cycle is the preparation of final accounts. This involves two steps-the first step is the closing of the temporary accounts (*i.e.*, revenues and expenses) which need not be carried forward to the next accounting period. The accounting stage for closing of the accounts is called income statement. The second step involves preparation of balance sheet with the remaining balances of accounts which are not to be closed during the year to the income statement.

Accounting Bases and Policies

Accounting, on the one hand, is a practical art attempting to record, classify, the summarise certain facts and events relating to business. On the other hand, it can be viewed as a theory of financial communication founded on assumptions and containing logically derived and internally consistent conclusions. Like the most other fields of knowledge, accounting is also oriented to certain concepts, postulates, conventions, and assumptions. These concepts, postulates, convention and assumptions which provide the operational content of the subject or a frame of reference to achieve the goal of accounting is collectively known as accounting bases. Accounting bases provide an orderly and consistent framework for periodic reporting of financial transactions of business, which by their very nature are both complex and diverse. This diversity justifies the existence of more than one recognised accounting basis for dealing with particular transaction. In practical circumstances, however, only three bases are recognised : (a) The accrual basis, (b) The cash basis, and (c) hybrid basis. Thus, when more than one choice is available for reporting financial transactions, one must choose the most appropriate basis keeping in mind the circumstances and the purpose of preparing the final accounts. The application of choice out of recognised alternatives is then said to constitute the accounting policy of the organisation. To put in other words, accounting bases are the recognised methods of presentation of transactions within the principles of accounting, while accounting policies are the recognised exceptions or adaptations of principles necessary to meet the peculiarities of an organisation or the needs of its management.

Accounting as the Language of Business

Accounting is very often referred to as the language of business. In an important sense this is an apt phrase, because accounting as an information system possesses many of the characteristics of a formal language system which is used in interpersonal communication. However, this is a technical language designed to cater to a special need.

There are a number of reasons for describing accounting as the language of business. *The Webster's Third New International Dictionary* has formally defined a language as "The words, their pronunciations, and method of combining them used and understood by a considerable community and established by long usage". Another definition of language given by the *American Heritage Dictionary of the English Language* describes language as "any method of communicating ideas, as by a system of signs, symbols, gestures or the like : The language of algebra".

Though these two definitions are not exhaustive, one can easily find many common properties of language present in accounting :

Firstly, language is a set of symbols carrying particular meaning. Accounting also uses symbols. For example, 'Dr.' and 'Cr.' which imply writing in the left hand side and right hand side of the account respectively, are two symbols unique to accounting. Other than this, they do not carry any particular meaning or attributes like 'good' or 'bad'. In that sense Dr. and Cr. are two neutral terms. They do not connote any value judgment. Further, accounts which are either debited or credited, is a process of coding or symbolic representations of economic events and transactions. This is a process of translation into and out of symbols

Secondly, language is systematic; it has definite rules either by grammar or by usage. The rules of debit and credit in accounting are also definite, though the reasons for writing debit and credit in the left hand side and right hand side of the account, respectively are due to long held usage or convention.

Thirdly, in case of language, words can be manipulated to construct different meaning or ideas. Accounting also employs rules of manipulation. The technique for determination of profit may be considered as rules for manipulation of accounting symbols.

Finally, the fundamental attribute of language is to communicate information. Accounting system does communicate information. "As the language of business accounting expresses economic facts and relationships. Through the medium of financial statements, accounting communicates the contribution and the relative economic rights and interests of the economy segments-stockholders, management, labour, creditors, customers, government and general public".

But, as with the language system there are many semantics or usage, the user of accounting language must be aware of the axioms, rules and conventions in order to increase understanding of this business language.

The Systems Approach to Accounting

The systems approach to accounting envisages that accounting be viewed not in isolation but as component in an interactive operating system in which accounting functions are integrally related to the organisational goal.

A system may be defined as 'an organised or complex whole; an assemblage or combination of things or parts forming a complex unitary whole. This definition highlights three basic features of a system :

- (i) A system has a number of sub-systems,
- (ii) These sub-systems must be in some kind of communication with each other, and
- (iii) These sub-systems complement each other to constitute a unitary whole.

Viewed from this angle, business may be considered the unitary whole and its systematic functions like production, marketing, accounting etc. are its sub-systems. Each of these sub-systems has its respective functions which contribute to the overall organisational goal.

In other words, these parts or sub-systems are not divorced from one another. For example, accounting whose function is to provide information of economic nature, is an integral part of management information system. When things are so related that one cannot operate without the other, this way of looking at things is called systems approach.

The feature which distinguishes the system approach from the theoretical approach is that systems approach is oriented to specified or clearly identified goal and is directed to their achievement. "Theories end with predictions which need not be utilized in any decision. Systems require theories for they require predictions in order to operate. In this sense theories can be viewed as a sub-set or component in a system view".

The advantage of systems approach is that it has made possible to take the full advantage of technological advances like computer. This has not only improved speed and considerably reduced the cost of data processing but has opened up new and wider field of application. The integration of accounting information in a network of computer system has provided larger scope to use accounting system for financial as well as non-financial control. Systems approach also facilitates operational research studies which form part of decision-making in a modern organisation.

Role of Accounting

Though modern accounting is a product of the socio-economic development and concomitant Industrialised economy of the 20th century, celebrated economist Paul A Samuelson did not fail to take a quick note of the pervasive role that accounting plays in our present socio-economic set up dominated by free enterprise system. In Samuelson's own language, "In this age of accounts some literacy in accounting has become

a prime necessity". The role of accounting can hardly be exaggerated in this sense that accounting has developed over the years to serve an economic system that has become increasingly complex. In our complex economic system, accounting provides vital information upon which economic decisions and many social actions rest.

In a democratic, free enterprise social system, what goods will be produced is determined in the marketplace through price system. Accounting information leads to decisions not only about the price, but also the efficient utilization of scarce resources of the society. The application of accounting information in social and macro economic decisions is not a far-fetched idea, though its best application is found in the micro economic units of the economy for day to day decisions. The principal beneficiary of accounting information is obviously the management of the business which produce accounting data. Management use of accounting data covers short run and long range planning, cost determination, operational control, assessment of objectives performance analysis and provision of basic information for decision-making. Other users who directly or indirectly benefit from accounting information are : shareholders, suppliers of resources – both short-term and long-term employees, consumers, Government bodies and social organisations.

As every individual including the Government seeks to maximise gain or utility, accounting information would be used to permit informed judgment and decisions by all the users of accounting information. For example, shareholders and investors may alter their decisions when they align their investments to the risk and return associated with the investments; suppliers may desist from providing credit when accounting information indicate inadequate liquidity position. Employee's expectation of continued employment, rise in pay, fringe benefits and congenial working conditions are related to the income of the business. The interest of the Government agencies are not confined to revenue collection alone, other areas such as protection of domestic industries, provision of subsidies etc. are also dependent on accounting information. Social organisations may seek to use accounting information to assess the role of business *vis-a-vis* the welfare of society. In fact, the utilities of accounting information is not confined to the categories of direct users mentioned alone. Many accountants in recent times have found potential in accounting for maximisation of social well-being related to the measure of income determination. The broad scope of accounting can be sufficiently utilised to formulate macro economic policies through reporting, which is an integral part of accounting. Apart from the macro economic application of accounting for national planning and national income determination, it can probably be used in future for human resource accounting, environmental resource accounting and many other diverse fields of socio-economic activities.

Limitations of Accounting

Although a wider scope for accounting has been envisaged above, conventional accounting is beset with a number of limitations. Some of the important limitations are :

- (i) **Monetary postulate** : In conventional accounting money is regarded as the ubiquitous measuring unit. For, money is not only the most common and convenient measuring unit, but it is the unit through which exchangeability of all goods and services, are measured. While the monetary measure accords several advantages, this is not free from its limitations. Its principal limitations is that it ignores every thing from the accountant's purview which can not be measured in terms of money. Thus, certain important matters which are amiss from the accountant's measurements are, human resources of the enterprise, social costs of production and certain qualitative aspects like managerial efficiency in utilisation of enterprise resources, employee relations etc.
- (ii) **Information for decision-making** : It is claimed that the principal goal of accounting is to supply relevant information that leads to judgement formulation and current decision-making. But this objective is somewhat frustrated due to the historical cost convention which totally ignores price level changes. Historical cost is sometimes found useful but it is insufficient for evaluation of current business decisions. Edwards and Bells thus observe that "the accounting problem becomes one of the recording and relating to each other particular price changes as they occur. Without these data the evaluation of business decisions must be an extremely loose procedure."

- (iii) **Lack of consistency in the basic premises of accounting** : One of the most important and interesting limitations of accounting is that even after 500 years of its development, accountants have failed to evolve a unified or general theory for accounting. The multifarious postulates, principles and conventions that from the general premise of accounting are very often found to be inconsistent and even conflicting with each other. One such example is, the objectivity principle of accounting creates condition for historical cost convention, but when the questions of conservatism arises, the objectivity principle is sacrificed without having regard to its theoretical justifications.
- (iv) **Imprecise measurements** : Accounting purports to measure economic events for the purpose of communication to the interested parties. But accounting as a measurement discipline is less than perfect, most of its measurements are imprecise, therefore, full credence on them can not be placed. For example, inventory valuation, depreciation measurements etc. are less than perfect. Therefore the resultant income measurement and the picture of its financial conditions are only tentative.

Some Important Branches of Accounting

In this age of specialisation many a branch of knowledge has emerged as a distinct discipline with clear cut objectives of its own. The same is true about accounting. According to the purpose and level of objectives, thus the general branch of accounting may be classified into the following :

- (i) **Financial accounting** : The terms 'Accounting' and 'Financial Accounting' are very often used interchangeably. It is, however, in relation to the other specialised branches of accounting discussed below that the distinction becomes evident. Financial accounting is the oldest and the forerunner of the other branches of accounting. It is also the purveyor of raw materials for other branches of accounting. In Kohler's Dictionary the term has been defined as "the accounting for revenues, expenses, assets and liabilities, a term often limited to the accounting concerned with published financial reports in contrast to internal aspects of accounting such as cost accounting." The emphasis of financial accounting is on the historical records of by-gone transactions with a view to fulfilling stewardship obligation by the management to the owners, creditors and other interested parties.
- (ii) **Cost accounting** : Although financial accounting is the forerunner of cost accounting, the concurrent development of cost accounting with financial accounting can be traced as early as the 15th century. There is evidence of the use of cost accounting by the merchants of Venice as a means of accounting control since the later half of the 14th century. It is, however, after the Industrial Revolution which created factory system that systematic cost accounting has emerged in England. The emphasis of cost accounting is on cost ascertainment, cost analysis and cost control and in contrast to financial accounting, it is prospective looking. Cost accounting embodies the analysis and synthesis of cost in such a manner that it is possible to disclose the total cost of production of a commodity or a service, *vis-a-vis* the analysis of the cost elements in terms of material, labour and overhead costs.
- (iii) **Management accounting** : The development of management accounting as a specialised branch of accounting is rather new and probably can not be traced back earlier than the present century. Its importance lies in supplying both quantitative and qualitative information to the internal management of an organisation for the purpose of day to day decisions. Due to its importance in today's complex business organisations it has been described as the 'accounting eye' that provides a way of making visible the internal functioning of an organisation. The NAA in the USA however, has defined management accounting as the "process of identification, measurement, accumulation, analysis, preparation, interpretation and communication of financial information used by management to plan, evaluate and control with in organisation and to assure appropriate use of and accountability for its resources".

Management accounting despite its recent origin has made remarkable strides, but it is also worth noting that in contrast to financial accounting, it is yet to evolve a general theory or a "generally accepted principle" as a theoretical base of the subject.

- (iv) **Social accounting** : Accounting has long been recognised as a social function, but the development of social accounting techniques is the newest of the accounting innovation whose history does not date back beyond four decades from now. Social accounting has been defined by Seidler and Seidler as " ...The modification and application by accountants, of the skills, techniques and discipline of conventional....accounting to the analysis and solution of problems of a social nature. This concept views social accounting as essentially an extension of the principles, practices and particularly the skills, of conventional accounting and accountants."

David Linowes, who is one of the pioneers in the field of social accounting, defines it in a broader sense as the "application of accounting in the field of social sciences. These include sociology, political science and economics"

The subject matter of social accounting, according to this definition, transcends beyond the traditional profit parameters of conventional accounting and intends to examine the exchange between the business and its social environment. It intends to cover such wide areas as the national income accounting, evaluation of social programmes, the role of accounting in economic development, the development of social indicators, human resources accounting, social audit and social cost measurement".

Relationship of Accounting With Other Disciplines

There are very few disciplines in the area of social sciences which are independent and self-contained. Accounting as a branch of social science is not exception, it has intimate relationship with many other disciplines. Below is discussed the relationship of accounting with some important disciplines.

- (i) **Accounting and economics** : Accounting as an organised body of knowledge is undoubtedly anterior to economics, but the strides that has been made since the 19th century through the development of sophisticated tools and techniques of analysis makes economics by far the most important of all the branches of social science. In spite of this, however, there exists an undeniable link between these two disciplines. In fact, many of the basic concepts of economics are derived from accounting practices and many accounting practices are done in an attempt to answer what are fundamentally economic questions. Thus, 'economics and accountancy are two disciplines which draw their raw materials from much the same mines They both study the operations of the firms; they both are concerned with such concepts as income, expenditure, profits, capital, value and prices.' In both the subjects, the essence of the study is the economic activities of man. The important difference, however, is that while economics studies them as an abstraction, accounting translates them in operational terms for the purpose of reporting to the concerned parties. Both the subjects are of mutual help—accounting makes the use of the principles of economics in solving most of its problems and in its turn helps economics to make its studies realistic by supplying accounting information (which is essentially micro-economic in nature) for the purpose of generalisation.
- (ii) **Accounting and mathematics** : The mathematical orientation of accounting is explicit from this basic fact that accounting practices in double entry or any other form is impossible without having a number system and the knowledge of counting. The system of counting which is at the base of mathematics is also a prerequisite for accounting. But mathematics does not comprise counting alone. It is a logical system that expresses all phenomena within a number system; mathematics provides the necessary logical tool to explain a given phenomenon. In much the same way accounting also involves expressing the economic phenomena within the number system of mathematics. There is however, no reason to believe that accounting is a branch of mathematics albeit, most of the accounting treatises published from Italy in the 15th century were part of general mathematics book. Mathematics only provide the tools that is to be used for the purpose of accounting measurement and reporting of economic events. The tools of mathematics improves the measurement techniques of accounting and its decision-making ability.
- (iii) **Accounting and statistics** : Apparently, there is no clear, direct relationship between accounting and statistics, but when examined a level deeper it becomes clear that there is an intimate relationship between these two disciplines, and many of the accounting techniques transpires to be application of statistical methods.

Statistics may be defined as the scientific method of dealing with quantitative information. Its purpose is the collection, presentation, analysis and interpretation of numerical data. In much the same way, accounting is a quantitative method that deals with economic events within a set of previously agreed concepts and postulates to aggregate, classify and summarise information of financial character for the purpose of taking vital economic decisions. Thus, in both cases statistics and accounting are in agreement with each other since they both aim at measurement and interpretation of quantitative data for the purpose of analysis and decision-making. Besides, accounting directly uses many statistical techniques. The most common of statistical techniques that are found in use in solving accounting problems are the ratios, various types of charts and diagrams in the analysis of published accounts. But the most important statistical technique that is increasingly being used in accounting now a days is the statistical decision tools for the purpose of cost control and verification and valuation of inventories. These statistical tools have vastly improved and facilitated the author's job.

- (iv) **Accounting and law :** The relationship between accounting and law is not very remote. The accounting system operates within the economic system characterised by a given socio-political set up and is manifested in the law of the land. Law regulates the external behaviour of man, dictates his formal relationship with other persons, as well as his economic rights and obligations. In fact, the domain of law is very vast and permeates every aspect of society and social life. As far as the economic interest of man is concerned, there is no dearth of law in India and in other countries that has direct or indirect bearing on accounting. Some important such laws in India that directly or indirectly regulates accounting are, the Indian Companies Act, The Banking Regulation Act, the Partnership Act and a host of mercantile and industrial law such as the Indian Contract Act, the Factories Act, Payment of Wages Act, etc. In addition, there are elaborate revenue laws such as the Income Tax Act, Central and Provincial Sales Tax Acts, the Wealth Tax Act, and Gift Tax Act etc. that also influences accounting practices. Accounting practices in any country must be a faithful representation of the provisions as entailed in those concerned laws.

Chapter-2

The History and Evolution of Accounting Thoughts

While accounting appears to have been practiced at least since the beginning of recorded history, accounting theory is of comparatively recent origin. This may be due to the difficult, abstract nature of accounting thought, or perhaps to a gradual change in the scope and methods of accounting, which was thereby rendered more amenable to the formalized type of explanation which we call theory. Possibly there is some other cause; it is a matter for conjecture. In this chapter we will attempt to trace the historical development of accounting thought outside the United States.

A SHORT HISTORY OF ACCOUNTING : THE PRE-CHRISTIAN ERA

Excavations conducted by archaeologists invariably discover evidence that accounting was a feature of early civilizations. There are respectable hypotheses that both writing and arithmetic originated in the need to keep accounts, and that this first took place at the time of man's transition from hunter to cultivator. The origins of capital, in the form of a store of food, are also the origins of accounting.

Many of the early records which are recognizable accounts, or the raw materials of accounts, lack those systematic attributes of form and content with which we associate accounting today. They consist mostly of inventories, lists of commodities used as payments, contracts of sale or loan, and, more rarely, simple journal entries. Nevertheless, ancient accounts were both used and useful; a modern archaeologist, studying the records which were kept by the Chaldean merchant Ea-Nasir nearly five thousand years ago, was able to assert that he was trading at a loss.

The force which provided the necessary impetus for the development of modern accounting was the introduction of money as a means of exchange. As with so many other discoveries it appears that the Chinese were the originators of this practice and that they used coined money some two thousand years before it appeared in Europe. Although Western knowledge of Chinese accounting in ancient times is very limited, we do know that sophisticated forms of government accounting, including both historical accounting and budgetary control, existed in China as early as 2000 B.C., accompanied by an audit function performed by a high and independent public official.

The coinage of money having a uniform value, therefore, suitable for use as a medium of exchange, first took place in Europe in the seventh century B.C. Greek civilization, based on the secularization of an economy previously controlled by the priests, possessed a sophisticated system of public administration with accounting and auditing functions, of which details have survived. Banking and other commercial activities were conducted in ancient Greece, and accounting played an important role in them. Management accounting was used in business, as we know from the Zenon papyri. These rolls represent the records of the Egyptian estates of Appolonius, finance minister to the Greek ruler Ptolemy Philadelphus II, which were managed by one Zenon. It is clear from them that techniques of accounting control, which we associate with the modern corporate form of business enterprise, were known and understood over two thousand years ago.

No accounting records have survived the fall of the Roman civilization, which extended from about 700 B.C. to 400 A.D. This has been attributed to the fact that the Romans kept their accounts on wax tablets which turned out to be a most perishable material. No doubt the Goths and Visigoths did their part by destroying all remaining physical records. Tantalizing glimpses of Roman accounting occur in the legal codes of Gaius and Justinian, in the orations of Cicero, and in other literary sources. From these it has been surmised that the Romans used the bilateral account form and even that the double-entry system was known fifteen hundred years before Pacioli.

We do know that large-scale commercial and industrial operations were a characteristic of the Greek and Roman civilizations, and that they operated complex organizations such as banking, shipping, and insurance. From the Zenon papyri and other records we know that basic principles of accounting, planning and control such as budgeting, the journal entry, financial reporting, and auditing were used by the Greeks, and therefore probably by the Romans. We are on more certain grounds when we view the modern history of accounting.

THE RISE OF THE DOUBLE-ENTRY SYSTEM

The destruction of the Roman and Byzantine civilizations was followed by a period of European history known as the Dark Ages. The feudal system of political organization rescued Europe from chaos and provided the stability necessary for the creation of economic surpluses. These surpluses represented the capital base on which the economic development of the Middle Ages was built. The conversion of a subsistence economy into a money economy was effected by the Norman adventurer-kings. The medieval period, therefore, saw the existence of conditions favorable for the development of accounting.

This development took place at several levels: government, business and the medieval manor. Apart from banking, the conduct of business was largely a function of small traders and artisans who kept accounting records of a crude memorandum nature, sufficient for their restricted information needs. Large-scale business operations were carried on by the banks and the church, the latter through the manorial system, and we find the banks using financial accounting based on principles which eventually became double-entry bookkeeping, and the manors using management accounting, based on essentially statistical models.

We have mentioned the use of the bilateral account form long before this period. The integration of this form into a system of double-entry accounts appears to have evolved during the twelfth or thirteenth centuries A.D. It may or may not have been an invention of the Italians who at that time dominated banking, trade, and what little manufacturing there was. Largely as a result of the *Liber Abacci* of Leonardo of Pisa, the Italians adopted Arabic in place of Roman numerals, which was an additional factor favoring the expansion of the concept underlying accounting. Although it is believed that the idea of double-entry was originated by banks, the oldest surviving record which incorporates double-entry principles is the Giovanni Farolfi branch ledger (Salon, France) for the year 1299-1300. More familiar are the double-entry trading accounts of Donald Soranzo and Brothers, merchants of Venice, from the first quarter of the fifteenth century. The *method of Venice* became the model for the celebrated exposition of double-entry bookkeeping published by Pacioli in 1494. The first professional organization of accountants was founded in Venice in 1581. The method of Venice then spread throughout the world, partly through translations and plagiarisms, partly through being transplanted to other countries by Venetian traders and clerks.

Giovanni Farolfi and Company were a firm of Florentine merchants, and it is noteworthy that the banking and manufacturing center of Florence experienced a parallel development of double-entry bookkeeping during the same period as Venice. In fact, Florentine accounting appears to have been more sophisticated than the method of Venice and more comparable with modern accounting systems. Datini (1335-1410) conducted a large-scale international business—what would today be called a multi-national corporation—using a full double-entry system of accounts for the control of foreign as well as domestic operations. The Medicis not only kept complex accounts for their banking operations, but also integrated cost accounting records for textile manufacturing. In these latter records we find the first examples of accounting for depreciation, interest on capital, and cost of production.

THE SOMBART PROPOSITIONS

Werner Sombart, a political economist of some note, was born in 1863 and died in Germany in 1941. He studied law, economics, history, and philosophy at the Universities of Berlin, Rome, and Pisa, eventually becoming a professor of economics in Berlin. His major work, *Der Modern Kapitalismus*, is a book in praise of capitalism and in it he predicted that capitalism would reach its zenith in the twentieth century.

Sombart's theme led him to examine the accounting records of the period during which capitalism developed in Europe, and he identified three casual factors which contributed to the growth of the capitalistic enterprise

1. The law
2. Business management techniques
3. The market

The law provided a framework for the firm, the capitalistic enterprise as a legal entity, and the market provided a means for it to become a financial entity. Business management techniques relied primarily on accounting, and Sombart put forward four explanations for the role which accounting played in this connection :

- (i) By representing the flow of capital through a business. "..... from the capital account to the transaction accounts through the profit and loss account and back into the capital account," accounting facilitated a concentration on the creation of wealth by means of profits.
- (ii) By restricting the observations of the entrepreneur to that which could be captured in the accounts accounting fostered the development of economic rationalism: *quod non est in libris, non est in mundo*. ("What's not in the book doesn't exist.")
- (iii) Systematic organization of the affairs of the business was achieved through accounting.
- (iv) Double-entry bookkeeping facilitated the separation of management from ownership by rendering the concept of capital objective and by permitting the separation of business accounts from household accounts. Winjum has examined these propositions in the light of accounting textbooks and records produced in England during the period 1500-1750 and has concluded that, while some evidence exists in support of all four, the primary advantage of double-entry bookkeeping was the creation of "order from chaos". The main purpose of accounting revealed by the textbooks and the main use of accounting revealed by the records was the systematic organization of the affairs of the business.

ACCOUNTING IN ITS AGE OF STAGNATION

Largely as a consequence of the influence which Pacioli's work had upon the business world of its time, but also partly because that world changed very little between 1494 and 1775, the period which followed the invention of double-entry bookkeeping has become known as accounting's "age of stagnation" The principal feature of this period is the extension of the method of Venice to other countries as they came to dominate world trade. Thus, we find double-entry accounting spreading to Germany, the Law Countries (now Belgium and Holland) England, Scotland, Portugal, and Spain during this period.

The emphasis of both literature and practice was on accounting as an aid to the management of a business, rather than as an information source for external users. The owner of a business was expected to keep accounts, and instruction in double-entry bookkeeping was a part of the education of the middle classes. Because the accounts were for one's own use, we do not find the preparation of financial statements and their audit occupying a central place in the expositions of textbook writers. Nor have we inherited any period income statements or balance sheets of the kind with which we are now familiar.

The prevailing practice was to continue the accounts through several years until some event occurred which called for a balance to be drawn up – the merchant's death, the filling of an account book, the disposal of the business. We know that the accountant-businessman sometimes prepared financial statements for specific periods, and the profit and loss account, precursor of the modern income statement, was, as its name implies, a listing of profits and losses on individual ventures or lines of business. Similarly, the balance sheet was listing of balances left over after profits and losses had been closed out to the profit and loss account. Nevertheless, the concepts of capital as the difference between assets and liabilities, and of net profit as the change in capital between two dates (after adjusting for capital contributions and withdrawals) was well established during the age of stagnation.

THE INDUSTRIAL REVOLUTION AND THE ENGLISH COMPANIES ACTS

We will restrict ourselves here to a description of the way in which accounting and financial reporting developed in England from about 1775 (although a comparable sequence of events can be noted in other European countries) expanding on the reference to this aspect.

The industrial revolution, which is conventionally regarded as beginning in the 1760s with the invention of power machinery, had several consequences of far-reaching importance to the history of accounting. One was the growth of the large-scale enterprise, beyond anything previously known, requiring quantities of capital greater than could be provided by one man or one family. Another was the introduction of the variable time period into production in the two senses of the time period required to amortize machinery and other equipment, and the time period required for production itself.

The demand for capital involved increasing numbers of savers in investment situations, either directly or through financial intermediaries such as banks and insurance companies. The corporation proved to be the most satisfactory form of business organization from this point of view. As more and more individuals and institutions were involved as stockholders, the financing function became separate from the management function, which has been designated the *managerial revolution*. In this situation the owners of the business were no longer able to inform themselves by keeping accounts for its operations, because they took no part in the management of the enterprise.

To afford these outside investors a measure of protection, the British government introduced a succession of Companies Act. These laws placed certain obligations on the promoters and managers of corporations as part of the price they had to pay for the privilege of incorporation. The 1844 Act required the directors of a company to supply the stockholders with audited balance sheets annually, and the 1865 Act provided a model form of balance sheet for this purpose. This legislation has been progressively supplemented and refined to the present day. It is aimed at providing investors and other financiers with audited information in the form of accounts on which to base their investment and disinvestment decisions and from which to judge the manner in which the directors of the corporation have managed the business.

The lengthening of the time period of production had two principal effects. These were the development of business credit, as distinct from investment, and the gradual transfer of attention from the balance sheet to the profit and loss account. Business credit, by its nature short-term and revolving, required decisions for which short-term information about financial position and results was necessary. The need to prepare more frequent financial statements which would reveal profitability and liquidity gave considerable impetus to the development of accounting. In the preparation of financial statements, the analysis of changes in capital became necessary for a variety of operating decisions. This led to the establishment of rules for income statement preparation—in particular, for calculating depreciation, the valuation of inventories, revenue recognition, and provision for future expenditures arising out of past activities.

A by-product of the industrial revolution was the growth and refinement of management accounting. The use of accounting and other quantitative data for purposes of management planning and control has been noted in Ancient Greece, in the medieval manors, and by the traders of the age of stagnation. Some cost accounting was done, varying in sophistication from the *ad hoc* calculations of individuals to the integrated systems of the Medici factories and the French Royal Wallpaper Manufactory. The complex manufacturing processes and large-scale organization which appeared during and after the industrial revolution required more detailed and systematic analyses of costs of production. Thus, the subject of cost accounting, encompassing the accounts necessary to plan, control, and analyze costs, acquired a separate existence during the second half of the nineteenth century. This separation of cost from financial accounting has persisted to the present, in spite of practical and theoretical efforts to integrate them. For this reason, there appear to be two

separate theories of accounting and reporting, an unsatisfactory state of affairs in that it should be possible to present one unified theory of accounting.

EARLY ATTEMPTS AT ACCOUNTING THEORY

Historically, there have been three basic approaches to the development of accounting theory. Attention was first directed to the account itself, and attempts were made to construct rules for the operation of accounts. This led to the celebrated personification theories (discussed later in this section) in which the account was ascribed the qualities of a person who received and gave. But an account is not a person, and recognition of this fact directed attention to the transactions and events which are in great part the subject-matter of accounts. This led to attempts to formulate rules and standards designed to ensure that objective economic facts were recorded and reported. It then became clear that accounts contained values other than those represented by transactions and events, and that the very concept of value was subjective. Attention is now directed to the user of accounting, and contemporary accounting research is heavily influenced by such questions as : is it useful ? to whom ? is it used ?

The transfer of accounting knowledge from one age to another, and from one part of the world to another, was accomplished by writing, teaching, and example. Until the twentieth century, however, very little of this involved theoretical explanation separate and distinct from practical instruction. In the absence of an accounting theory, early writers had great difficulty in expressing their objectives, models, and systems. They resorted in most cases to precept and admonition, frequently bolstered by appeals to the deity.

A few writers attempted generalizations which would avoid the necessity to memorize many rules and procedures. One of the earliest devices was the *personification theory* of accounts. This device imputed personalities to accounts for things, so that they were treated as living persons. Personification permitted the formulation of general rules, such as "debit him that receives; credit him that gives", which appear to have explanatory qualities.

Personification took three forms; the attribution of human qualities to inanimate objects, the fiction that each account was a branch of the owner's personality (e.g. "John Smith his goods") and the construction that the account represented a clerk, who received and gave up value for the proprietor of the business. Of these, the most useful was the second, for it permitted the accounts of a business to be classified into personal accounts, or accounts of persons outside the business (e.g. debtors, creditors) and impersonal or real accounts, or accounts for objects owned by the owner. The former, of course, would be equal and opposite to the personal accounts kept by others, and must therefore conform to general rules. The latter, being peculiar to the particular business, could be handled in different ways.

The rise of the income statement, or profit and loss account, was accompanied by the development of a third class of nominal accounts for revenues and expenses. At this point personification came under severe strain. How does one personify, for example, discounts received or discounts allowed ? This, coupled with a growing realization of the artificial nature of the device, led to its abandonment. By the latter part of the nineteenth century explanations were being phrased in terms of transactions. The second generation of theorists was concerned with images of form and structure, and they attempted to explain accounting by demonstrating the effect of accounting entries on these images.

THE PROBLEM OF CLASSIFICATION

The problem of classification is fundamental to any science, and early writers on accounting attempted to classify ledger accounts in a logical order. An example of the transition from personalization to some other basis can be found in Abraham de Graef's *Instructie van het Italiaans Boekhouden* ("Instruction in Italian Bookkeeping") published in Amsterdam in 1693. He divided accounts into three groups

1. Accounts of the merchant as a person : Capital, Profits and Losses, Insurance, Reserves, Housekeeping, Interest.

2. Accounts of other persons : Debtors, Creditors, Participations in Trade Ventures, etc.
3. Accounts for merchandise : Goods in store, Goods in Ships afloat, Cash available for purchases, etc. (the *real* accounts).

Edmond Degrange in his book *La Tenue des Livres Rendue Facile* ("Bookkeeping made Easy"), published in Paris in 1795, divided these real accounts into five classes: Cash, Goods, Bills (Notes) Receivable, Bills (Notes) Payable and Profits and Losses. It is noteworthy that what was a personal account to do Graef was a real account to Degrange. Followers of Degrange became known as the "Cinquecontistes" or five account school.

In Belgium, H. Godefroid attempted to integrate cost and financial accounts for manufacturing concerns; requiring more classes, he borrowed from literary sources and in a textbook published in 1864 Godefroid suggested the use of titles, chapters, and sections for classifying accounts. In this scheme, one of the titles was used for departmental operating accounting, i.e. for cost accounts. Because of its expanded content, Godefroid's scheme became popular in Europe, and some of his followers decimalized his classification. By the end of the nineteenth century the decimal chart of accounts, based primarily on a classification of balance sheet accounts but including a section for operations, was in widespread use for didactic purposes as well as in actual accounting systems.

The first decimal chart of accounts to give equal weight to the income statement was published by Eugen Schmalenbach in 1926. Schmalenbach was a pioneer European accounting theorist, and his *Dynamische Bilanz* ("Dynamic Accounting"), originally published in Germany in 1916, was severely critical of the emphasis on the balance sheet. He argued that the objectives which were generally ascribed to the balance sheet were incapable of realization. The balance sheet could not present the value of the business as a going concern, because that value was different (more or less) from the sum of the individual parts, of which only a selection appeared in the balance sheet. The balance sheet was not a statement of financial position for the same reason and also because the assets and liabilities were not shown at liquidation amounts. Instead of pursuing unattainable objectives with regard to the balance sheet, Schmalenbach argued, accountants should concentrate on improving the profit and loss account (income statement) with the objective of accurately measuring the results of operations. This would relegate the balance sheet to the role of a list of balances in suspense, or "a step between two income statements" as the contemporary phrase has it. An example of a modern chart of accounts derived from Schmalenbach's classification is reproduced as on Table 2-1. It is noteworthy that more classes are allocated to income statement accounts than to balance sheet accounts.

THE BASIC EQUATION

The basic equation appears in the Italian and American literature during the nineteenth century. According to Fabio Besta, one of the Italian users of this equation, the central construct of a business is its capital, a pure abstraction without juridical meaning. It is found by deducting liabilities from assets. The American authors go a step further; they view capital as a representation of proprietorship. Thus, we call this early theory a proprietary theory of accounting.

The transactions of a business can now be referred to this equation to explain why we account for them as we do. If the transaction increases assets or decreases liabilities, it increases capital; Besta called this a *modifying* transaction. Transactions which alter assets or liabilities without modifying capital, he called *permutational* transactions. This permits the operation of accounts to be expressed in the form :

Assets		Liabilities		Capital	
increasing	decreasing	decreasing	increasing	decreasing	increasing
changes	changes	changes	changes	changes	changes

The basic equation, being expressed in balance sheet terms, presented difficulties for the explanation of entries for buying and selling and for expenses and other revenues. It was therefore expanded into the form

$$\text{Assets} + \text{Expenses} = \text{Liabilities} + \text{Revenues} + \text{Owners' Equity (Capital)}$$

By cancellation of expenses against revenues, this becomes the basic equation again. The income statement represents the substitution of revenues for expenses, the result of which is net income or loss, an increase or decrease of capital.

One of the advantages of the basic equation is that it also explains the statement of changes in financial position, or funds statement. Cancellation of expenses against revenues in the expanded equation turns it into the following form:

$$\text{Assets} = \text{Liabilities} + \text{Owners' Equity} + \Delta \text{Owners' Equity and}$$

the funds statement can then be expressed as :

$$\Delta \text{Assets} = \Delta \text{Liabilities} + \Delta \text{Owners' Equity}.$$

However, the basic equation still leaves the terms *asset*, *liability*, *owners' equity*, *revenue*, and *expense* undefined.

THE INTERNATIONAL CHART OF ACCOUNTS

An international accounting conference which took place in Paris in 1951, *Les Journees Internationales de la Comptabilite*, resolved to put forward a proposal for a chart of accounts which would be truly international in scope. The chart would have to reflect the basic characteristics of the firm, independent of peculiarities of national legislation, accounting conventions, or professional standards. The conference committee adopted a classification published by Joseph Anthonioz in 1947, which was based on a paper "The Cycle of the Economy" prepared by Maurice Lucas for the International Accountants' Congress held at Barcelona in 1929.

The classification is based on a proposition derived outside accounting : that a firm is an entity which takes savings from the economy, invests them in the forms of fixed and circulating capital, and by incurring costs produces goods and services for distribution to the economy. This proposition provides us with a model for the firm, depicted in Table 2-2. The model has two phases, a planning phase, which starts with the distributed product and proceeds backwards to determine the amount of savings required for investment, and an action phase, in which invested savings are transmuted into distributed products.

Table 2-1 GENERAL CHART OF ACCOUNTS
FOR GERMAN INDUSTRY (A)

CLASS 0		CLASS 1	
Fixed Assets and Long-term Capital		Current Assets and Current Liabilities	
FIXED ASSETS		CURRENT ASSETS	
LONG-TERM CAPITAL		CURRENT LIABILITIES	
00	Land and buildings	10	Cash
000	Buildings	100	Main cash
001/2	Land	105	Petty cash
003/7	Buildings	11	Banks
008	Buildings under construction	12	Cheques etc.
009	Depreciation on land and buildings	120	Undeposited cheques
01	Manufacturing plant and equipment	121/9	Bills receivable
010/9	Machines and equipments	13	Current (temporary) investments
020/7	Machines and equipments	130/6	Quoted investments
028	Machines under construction	178/8	Own and holding company's shares
029	Depreciation on plant and equipment	139	Amount written off current investments
03	Vehicles, tools, patterns etc.	14/15	Debtors (c)
030/3	Vehicles	140	Due for goods delivered
034/6	Tools, apparatus	141/9	Analys
037/8	Patterns etc.	150	Other debtors
039	Depreciation on vehicles, tools, patterns etc.	151	Advance payments
04	Control accounts for fixed asset movements	152	Advances to associated companies
041/4	Additions purchases	153	Advances to directors, employees etc.
045	Additions own manufacturing	154/8	Other advances
049	Eliminations	159	Adjustments to debtors' accounts (reserve etc.)
05	Other fixed assets	16/17	Creditors
050/2	Patents, trade marks goodwill	160	Creditors for goods supplied
		161/9	Analysis (c)
		170	Other creditors
		171	Advance payments received
		172	Advances received from associated companies
		173/4	Due to employees (savings schemes etc.)
		175/8	Other creditors
		179	Adjustments to creditors' accounts
		18	Bills payable, due to banks
		180/1	Bills payable
		182/9	Due to banks over-draft
		19	Transitory and confidential account
		190/1	Transitory account for invoices
		192/3	Transitory account for receipts and payments
		194	Amounts to be allocated
		195/6	Other transitory accounts
		197/9	Confidential accounts

TABLE 2-1 (Continued) Issued by the Federation of German Industries—Business Economy Section

CLASS 2		Class 4	CLASS 5 - CLASS 6	CLASS 9
Neutral Expenses and Income		Expenses by Type	Cost Accounts	Closing Accounts
053	Depreciation on patents etc.			
	Financial fixed assets			
054	Investments in subsidiaries			
055	Quoted investments			
056	Advances on mortgages			
057	Other long term advances			
058	Debits applicable in long-term capital (h)			
059	Depreciation on financial fixed assets			
20	Non-operating expenses and income	40/42 Materials (h)	Reserved for departments other cost centres, products, processes, etc.	90/96 Reserved for summarization & social needs (l)
200/5	Extraordinary non-operating exp. and income	40/1 Materials consumed		97 Cost operating statements
206/9	Recurring non-operating exp. and income	400 Control account material consumed	CLASS 7 (g)	98 Profit and Loss accounts
21	Expenses and income of land and buildings	401/19 Analysis (direct indirect finished etc.)	Inventories of Finished Products and Work in Progress	980 Manufacturing accounts
22	Analysis	42 Fuel and power	70/77 Reserved for costs not allocated to cost centres, products etc. (selling costs etc.)	981/4 Free
23	Depreciation	420 Fuel		985/6 Inventory adjustments
24	Interest expense & income	429 Power	78 Inventory of work in progress	987 Materials of neutral expense and income
240/1	Interest paid	43/44 Personnel expenses	79 Inventory of finished goods	988 Expense and income affecting operations as a whole
242/4	Discounts given	43 Salaries and wages	799 Adjustments to book values of inventories	989 Profit & Loss account
245/6	Interest received	431/8 Analysis		998 Opening Balance sheet
247/8	Accounts taken	44 Social security expenses		999 Closing balance sheet
25/26	Extraordinary operating expense and income	440/6 Health unemployment insurance etc.		
	Applicable to the period	447 Voluntary contributions		
250/1	Sundry losses	448 Other welfare expenses		
252/9	Other expense and income	45 Maintenance		
		450 Land and building		
		451 Plant and machinery		
		452 Vehicles, tools		
		453 Equalisation account		
		454 Other		

<p>26 Applicable to other periods 260 Fixed assets 261/5 Manufacturing 266 Revenue 267 Tax 268 Other expenses 269 Invoice 27/28 Contra accounts (d) 27 Expenses available to other periods included in cost accounts 28 Other contra accounts for cost accounts 280 Excess depreciation 281 Inventory charged 282 Contingency reserve 283 National salary for proprietors 284 Other calculations 29 Expenses and income relating to corporations as a whole (see corporation taxes)</p>	<p>455 Services 456 Laboratory & research 46 Taxes, licences, insurance premiums etc. 460/3 Taxes on income and capital 464/7 Other taxes & licences 468/9 Insurance premiums etc. 47 Rent & administrative exps. 470/1 Rent and machine hire 472/3 Travel, transportation and carriage 474/5 Postage, telephone 476 Office expenses 477/8 Publicity and 479 Financial expenses 48 National expenses 480 Excess depreciation 481 Interest charged 482 Contingency reserve charges 483 Proprietors' salary charges 484 Other 49 Internal transactions</p>	<p>CLASS 8 Income 80/82 Reserved for selling costs accounts (t) 83/84 Income from products and services 85 Income from re-sale of goods purchased 86 Income from by-products and secondary activities 87 Income from services performed by the business for itself 88 Income adjustment accounts 880/2 Additions to income 883/9 Reductions of income</p>
<p>30/37 Manufacturing 300/79 38 Parts purchased and work given out 39 Manufacturing goods purchased 390/6 Purchases (f) 397 Adjustments to inventories</p>	<p>Analysis (e)</p>	
CLASS 9 Materials		

Table 2-2 THE INVESTMENT CYCLE

		Direction of the action phase
Investment	= the allocation of scarce resources to production	= capital
Equipment	= the productive capacity required for any investment cycle	= fixed capital
Finance	= the means of payment required in order to function in a money economy	= working capital
Credit	= those relations between the firm and its environment which affect its needs for finance	
Supply	= the raw materials to be transformed by the firm during its production activities.	
Costs	= the factors of production used up by the firm during its production.	
Production	= the production activities of the firm in the form of goods and services produced, at cost value	= expense
Distribution	= the transfer of production to the environment, at proceeds value	
Results	= the difference between costs and revenues	= profit or loss
Direction of the planning phase	Note : Profit increases capital Loss decreases capital	

We then structure this model by including under each term the features which are empirically observable in the real world. Firms obtain savings in two forms, proprietorship and debt. Fixed capital takes many forms : land, plant, equipment, livestock, goodwill, etc. Circulating capital consists of the three elements - cash, credit, and inventories. Since credit is a two-way street, circulating capital (or working capital - it is called in business) is represented by the equation : working capital = current assets - current liabilities where current assets is a summation of cash, inventories, and credit recognized by the firm, and current liabilities is a representation of the firm's credit.

Costs are observable in many forms and may be classified by type (*natural classification*), by object (*functional classification*), or by variability (*behavioral classification*). A classification by type is into wages and salaries, purchased supplies, depreciation, interest, and taxes. A functional classification is into production costs, selling costs, and administrative costs. A behavioral classification is into fixed and variable costs. Production is observable in the

forms of work in process and distribution in the forms of individual products, or product groups, of goods or services.

It will be noted that profit or loss (*net income*) has not been mentioned. In this theory of accounts approach, as Hendriksen calls it, profit is the difference between production and distribution measurements. It would be possible for the proceeds of distribution to be imputed back to the factors of production so that neither profit nor loss resulted. However, we observe that business firms operate under conditions of uncertainty, producing either a profit or a loss, which must be accommodated.

In the chart in Table 2-3 the model is depicted by representing the internal operations of the firm as a two-dimensional matrix, and the operations whereby the firm transacts with its environment (acquisitions and disposals) as a third dimension. The two dimensional matrix corresponds to the equation:

$$\text{Saving} = \text{Investment}$$

where

$$\text{Investment} = \text{Fixed capital} + \text{Working capital}$$

This will be recognized as the basic equation used by finance theorists, in the form:

$$\text{Finance} = \text{Investment}$$

The model can also be represented by means of the expanded equation :

$$\text{Investment} + \text{Revenues} = \text{Fixed capital} + \text{Working capital} + \text{Costs}$$

leading by cancellation to :

$$\text{Investment} + A \text{ Investment} = \text{Fixed capital} + \text{Working capital}$$

and the representation of the third dimension, which underlies the funds statement, as :

$$A \text{ Investment} = A \text{ Fixed capital} + A \text{ Working capital.}$$

It is immediately apparent that this model has some explanatory potential, since it differs from the basic equation of traditional accounting theory only in classifying current liabilities as part of working capital and not as investment, and ties in also with the theory of finance. As we shall see, contemporary accounting practice is best explained by reference to this model, which never the less has severe limitations. We shall call this the *traditional* model used in accounting, in either of the two forms illustrated.

TABLE 2-3 THE ACCOUNTING MODEL OF THE FIRM
TIME

INVESTMENT	EQUIPMENT	FINANCE	CREDIT	SUPPLY	COSTS	PRODUCTION	DISTRIBUTION	TIME
	Balance Sheet					Income Statement		t_1, t_2, \dots, t_n
Equities	Fixed Assets	Cash	Receivables Payables	Inventory	Expense	Cost of Goods sold	Sales	
Owners'	Land		WORKING CAPITAL				Expenses	
Equity (Stockholders)	Buildings Plant Machines Vehicles Furniture Livestock etc.	Cash on hand	Accounts Receivable from Sales and Other Advances	Purchased Materials, Parts, etc. Which Can Be Stored	etc. Consumed + Personnel (Labour) +	Materials for Products (Services) A B C etc.	Revenues for Products (Services) A B C etc.	
+ Long-term Loans (Creditors)		Cash at bank	-					
		Near-cash (Negotiable Securities)	Accounts Payable to Suppliers and other Short-term Liabilities	Work in Process + Finished Goods Not Yet Sold	Power + Transport Insurance Depreciation Taxes etc.			
			Equities = Fixed Assets + Working Capital rather than Assets (Fixed + Current) = Liabilities (Equity + Current) + Residual (Owners' Equity)					
							Sales - Costs = Profit or Loss	

LIMITATIONS OF THE TRADITIONAL MODEL

The traditional model permits us to explain much of the subject matter of accounting: nevertheless, it is constrained by severe limitations. In the first place, it does not identify all classes of observations which should be included in the scope of accounting. As we saw in Chapter 1, many accountants attempt to define accounting in terms of information. Information is itself defined as *purpose-oriented data*, that is data which has been selected for a particular purpose, such as, to use in a particular decision model. But selection of data presupposes a surplus of data, and the accountant is concerned first with data and only secondly with information. Since information is a function of the available data, some writers have attempted to identify accounting events as transactions and other changes in states which are perceived and recorded by accountants. But events do not occur labelled "accounting event", the problem of perception remains.

In the second place, the model does not deal explicitly with the question of measurement, which we shall call *valuation*. Valuation is defined here as the representation of observations in monetary terms, and can be viewed simply as multiplying a quantity by a price. Thus there is a problem of determining quantities and a problem of determining prices; the two problems are frequently combined under the one question: how shall we measure? Reference to Table 2-3 will show that the measurement problem is not one but a succession of problems. Since the transmutation of savings into product goes through a series of stages, the question, how shall we measure, can arise at any one of them.

Two accounting theories which have particular relevance to these questions may be mentioned at this time. The *proprietary* or ownership theory places the owner of the business in the center of the accounting model, so that all observations are made from his viewpoint. This leads to the inclusion of all changes significant to him; assets are things owned, liabilities are debts owed; expenses are losses and revenues, gains; net income is the change in the proprietor's capital during a period. This theory suggests the inclusion of the owner's non-business assets, liabilities, revenues, and expenses, and the use of market prices for valuation purposes.

Although this theory corresponded well enough with the facts of business accounting preceding the industrial revolution, it failed to explain business accounting following the managerial revolution. The separation of ownership from management and the preparation of financial statements for the owners by the managers imply that personal factors should be omitted from the area of business accounting. The *entity* theory views the firm as separate from its owners and includes only the assets, liabilities, revenues, and expenses of the firm; net income is still a change in the proprietor's capital during a period, but the capital is simply an interest in the firm. At the same time, market prices no longer represent appropriate valuations, because the owner cannot dictate market transactions to the firm.

Development of Accounting Profession in India

Without doubting the antiquity of Indian civilisation, we can boast of the advanced social system that prevailed in ancient India. When the European civilisation was in its embryonic stage, India held high the flag of its science, art and culture. Trade and commerce developed as a spontaneous response to the demand of such a highly developed society.

The seven preconditions – the art of writing, arithmetic, private property, money as a medium of exchange, credit transactions, commercial activity and owner's capital investment, identified by Littleton for the emergence of systematic accounting practices were all present in India much before Alexander's invasion of India in 327 B.C. *Arthashastra*, which is a complete treatise on state craft and economics, written by Kautilya about 321 B.C., portrays contemporary Indian thinking on state administration, economics and fiscal system. The elaborate and complex tax system devised by Kautilya certainly could not have been possible without accounting. *Arthashastra*, which contain a specific chapter dealing with the 'Business of keeping Accounts in the office of Accountants' bears ample testimony to the existence of not only a complete system of bookkeeping and accounting, but also the existence of the profession of accountant. Some researchers are of the view that Bahi-Khata system of Accounting (known as indigenous accounting system) still practiced in the incorporated enterprises in India which developed prior to the Greek and Roman times might have been the origin of the Italia double entry book-keeping.

The history of modern accounting in India, however, can be traced with the arrival of The East India

Company in India and its subsequent colonisation by the Britishers in the middle of the 18th century. Thereafter, the development of accounting and accounting profession can be traced on parallel lines with the enactment of several fiscal and companies Acts. The first legislation relating to companies in India was enacted immediately after the Sepoy Mutiny in 1857. The Act did not make elaborate provisions regarding the keeping of accounts or their audit. The Indian Companies Act of 1866 for the first time made elaborate provisions regarding the audit of companies, although no hard and fast rules in respect of the qualification of the company auditor was made in this Act. The question of the qualification of auditor in India became a controversial issue at that time because, unlike England, persons with similar qualifications were difficult to obtain all over India. Therefore, responsibility was vested in the local governments to appoint suitable persons as the auditor of companies. The local governments, in exercise of the powers vested in them, could issue two types of certificates – the Unrestricted Certificates and Restricted Certificates, enabling the holder to act as auditor within the province concerned and in the language specified in the certificate. The holder of Unrestricted Certificates could, however, practice all over British India. The Mumbai Government started a scheme for the training of such auditors which included a qualifying examination known as the Government Diploma in Accounting (G.D.A.). Such auditors were fully recognised by the Indian Companies Act of 1913.

From 1930 the powers of the provincial governments to grant licence to the auditors were withdrawn. It then became the privilege of the Central Government which appointed the Indian Accountancy Board for the purpose of granting licence to the auditors. From 1930 to 1948, three Accountancy Boards were set up, the last being set up in 1939. The main purpose behind the setting up of the Accountancy Board was to exercise greater governmental control by consolidating accountancy practice all over India. Because of growing public participation in Joint Stock Companies in India, it seemed to be a right step for the time being although, later on, it was felt that lack of autonomy will impede the growth of accountancy profession in India. The Accountancy Expert Committee which was appointed in May 1948, eventually came out with its recommendations that an autonomous association of accountants should be set up in India and the registered accountants should be designated as "Chartered Accountants". The council of the associations should be a completely autonomous body free from government control except in certain matters. Following the recommendation of the Accountancy Expert Committee, The Chartered Accountants Bill was laid before the Constituent Assembly for consideration on 9th April, 1949 and it received the assent of the Governor General on 1st May, 1949. Thus, a long cherished desire of the accountants for an autonomous body of accountants was fulfilled and the Institute of Chartered Accountants of India (ICAI) was born. The Institute of Chartered Accountants of India is an important milestone in the history of accounting in India not because of the impetus it provided for the development of accounting profession alone, but also for its efforts to evolve accounting standards that would meet the socio-economic requirements. The Accounting Standard Board which was setup by the Council of the Institute in 1977 has so far brought out Twenty eight Accounting Standards (AS) in important accounting areas. These are :

- AS 1 : Disclosure of Accounting Policies, 1991/1993
- AS 2 : Valuation of Inventories (Revised) 1999
- AS 3 : Change in Financial Position (Cash Flow Statements), (Revised), 2001
- AS 4 : Events Occurring After the Balance Sheet Date, 1996
- AS 5 : Prior Periods and Extraordinary Items and Change in Accounting Policies (Revised) 1996
- AS 6 : Depreciation Accounting (Revised), 1995
- AS 7 : Accounting for Construction Cost, 1995/2003
- AS 8 : Accounting for Research and Development, 1991/1993
- AS 9 : Revenue Recognition, 1991/1993
- AS 10 : Accounting for Fixed Cost, 1991/1993
- AS 11 : Accounting for the Effects of Change in Foreign Exchange Rate (Revised), 1995

- AS 12 : Accounting for Government Grants, 1994
- AS 13 : Accounting for Investment, 1995
- AS 14 : Accounting for Amalgamations, 1995
- AS 15 : Accounting for Retirement Benefits in the Financial Statements of Employees, 1995
- AS 16 : Borrowing Cost, 2000
- AS 17 : Segment Reporting, 2001
- AS 18 : Related Party Disclosures, 2001
- AS 19 : Leases, 2001
- AS 20 : Earnings Per Share, 2001
- AS 21 : Consolidate Financial Statements, 2001
- AS 22 : Accounting For Taxes on Income, 2001
- AS 23 : Accounting For Investments In Associates In Consolidated Financial Statements, 2002
- AS 24 : Discounting Operations, 2004-05
- AS 25 : Interim Financial Reporting, 2002
- AS 26 : Intangible Assets, 2003-04
- AS 27 : Financial Reporting of Interests in Joint Ventures, 2002
- AS 28 : Impairment of Assets, 2004-05.

Luca Pacioli and His Contribution

In the history of modern accounting spanning over five hundred years, no single person had dominated accounting ideas as Luca Pacioli did. Born in 1445 at Borgo San Sepolero, near Florence, Luca Pacioli took orders with the Franciscan Frairs. He started his career as a teacher of mathematics in the university of Perugia. He soon established himself as a distinguished professor of mathematics and Pope Leo X in recognition of his outstanding career appointed him professor of mathematics in 'Sapienza' at Rome in 1515 where he ended his career. In between, he also taught in the universities of Milan, Florence, is a and Naples. It is also learnt that before joining teaching, he spent some time as an apprentice to a Florentine merchant. Probably, this exposure to business world in early life prepared the background for his famous work, *Suma Arithmetica Geomatria Proportioni et Proportionalita* (every thing about Arithmetic, Geometry and Proportion) which was published from Venice in 1494. A section of the book entitled *De Computis et Scripturis* contained discussions on double entry book-keeping. Historians are unanimous that *Suma* is the first *published* work on double book-keeping, though double entry was much in vogue at least two hundred years before Pacioli was born. Some historians, however, argue that mathematics treatise by Benedetto Cotrugli, which also contained a section on double entry, may have been the first book on double entry book-keeping. The manuscript of the book was written in 1458, although it was published much later in 1573. It is, however, not known whether the 1458 manuscript contained the section on book-keeping, since the original manuscript of the book was destroyed by fire.

Despite some controversies about the originality of Pacioli's work, he is widely acclaimed as the father of modern accounting. And this is not without any reason. The treatise of Pacioli which reaches the students of accounting through the translation of John B. Geij beek and Pietro Crivelli demonstrates ability of Pacioli who combined the skill of an adept mathematician and the prudence of a practical businessman in preparing his work. The book became so popular "that for nearly half a century major book-keeping texts drew heavily on the content of *Suma*, often dealing with material in the same way and even using similar examples." It may be remembered that since the time of Luca Pacioli accounting has undergone sea changes and refinements due to the influence of changing socio-economic conditions, but the superstructure of double entry book-keeping provided by Pacioli remains the same even today. "The presentation made by Pacioli was not crude and incorrect but contains the essentials of book-

keeping as we know it today.”

The system of book-keeping, according to Pacioli, was based on three records : The memorandum the journal and the ledger, though Pacioli recommended that memorandum need not be maintained always especially when the size of transactions is small. As an essential feature of double entry book-keeping he urged the need for cross referencing of debit and credit entries which is also done in the present days through trial balance. Chapter 33 of his book deals with balancing of ledger. The balancing of ledger was usually done either because the pages of ledger are filled up or because of the beginning of a new year. Although balancing of ledger on regular basis was not much in use until 1700, the procedure of transferring balances to the new ledger including the closing of remaining accounts (*i.e.*, the accounts which were not transferred to the new ledger) by transfer to profit and loss account were also described by Pacioli.

Development of Accounting Theory

One of the interesting aspects of accounting evolution until about the first quarter of the 20th century was that there was very little effort to develop systematic accounting theory. With the development of rail roads and the passage of the first Companies Act in England in the early 19th century there was created new condition for development of accounting profession and professional accounting institutions in England and the USA. But the role of the professional accounting bodies in the early stages were mostly confined to seeking *ad hoc* solution to the new accounting problems or at best they attempted to “theorize” accounting by compiling existing best accounting practices. They did not in general attempt to build a systematic theory of accounting.

While this *ad hoc* approaches to the new problems facilitated some progress, especially in terms of specific technical problem areas, the lack of appropriate basic theory increasingly made the position of accounting untenable. The need for a basic theory as a frame of reference for the subject or “as a co-herent set of concepts explaining and guiding the accountant’s action in identifying, measuring and communicating economic information” was being increasingly felt.

It was, however, not before 1930s that accounting developments focussed on the need for a systematic development of theories. The systematic theoretical approaches to accounting that began to take shape during this period attempted to : (i) develop basic postulates and principles, (ii) broaden the base of accounting by relating to those fundamental disciplines such as Economics, Behavioural Science and Measurement theory, (iii) formalise accounting theory into a more abstract form and (iv) develop conceptual framework for accounting.

The impetus for these new developments in the field of accounting came mostly from the research efforts of the leading professional accounting bodies and the contribution of accounting literature.

AICPA Research

The AICPA is such a professional accounting body that side by side with the development of accounting practice in the USA devoted itself to the serious business of accounting research to give accounting a much needed theoretical base. The contribution of the AICPA in this respect, compared to its counterparts in the UK and Australia, are large enough to restrict our discussion mostly confined to the AICPA effort of accounting theory development.

The major attempt of the AICPA to develop accounting theory may be discussed under the following distinct phases : (i) Accounting Terminology Bulletins and Accounting Research Bulletins of the committee on accounting procedures from 1938 to 1959, (ii) Accountancy Research Studies of the Accounting Principles Board and its Opinion and Statements from 1959 to 1973, and (iii) The conceptual framework project of the Financial Accounting Standard Board after 1973.

- (i) **Accounting terminology bulletins and accounting research Bulletins** : The earliest attempt of the AICPA to develop systematic accounting practices in the USA can be evidenced from the establishment of the committee on Terminology in 1920. Till 1959 the committee published four Accounting Terminology Bulletins “in an attempt to promote uniformity

in the use of terms in connection with the Business Operations and Financial Statements”.

The first of these bulletins definitions of key-terms in connection with the financial statements, *i.e.*, the balance sheet and the income statement. The second and the third considered terms like revenue, income, profit and earnings and book value, respectively, while the fourth defined cost, expenses and losses.

The Committee on Accounting Procedures (CAP) established by the AICPA in 1938, before its demise in 1959 published 51 Accounting Research Bulletins. Of the first 42 bulletins, first eight were published in 1953 as Accounting Terminology Bulletin No. 1 and Bulletins No. 44 to 51 were published separately between 1953 and 1959. The other Bulletins were compiled and published as Accounting Research Bulletin No. 43.

The most important feature of the Accounting Terminology Bulletins and Accounting Research Bulletins was that they attempted to theorize the practice of accounting by doing not more than defining the basic terms of accounting and developing some *ad hoc* principles for some related issues. The attempt in general lacked effort to develop coherent set of principles for accounting as a whole.

- (ii) **Accounting research studies under the auspices of the APB** : The failure of the *CAP* to develop systematic principles of accounting led the AICPA to establish another new body, the Accounting Principles Board in 1959.

The APB mostly concerned itself to expressing opinions on accounting issues, but it also engaged itself to accounting research project through its Accounting Research Division.

The APB over its entire tenure until 1973, apart from Publishing 31 opinions also published four general statements of accounting :

APB Statement No. 1 : As a report on the receipt of Accounting Research studies No. 1 and 3.

APB Statement No. 2 : Disclosure of Supplementary Financial information by Diversified Companies; issued in 1967.

APB Statement No. 3 : Financial Statements Restated for General price level change, issued in 1969.

APB Statement No. 4 : Basic concepts and Accounting principles underlying financial statements by Business Enterprise, issued in 1970.

The effort of the Accountancy Research Division of the APB resulted in the Publication of 15 Accounting Research Studies :

ARS No. 1 : The Basic Postulates of Accounting by Maurice Moonitz, in 1961.

ARS No. 2 : Cash Flow Analysis and the Funds Statement by Parry Masion, in 1961.

ARS No. 3 : A Tentative Set of Broad Accounting Principles for Business Enterprise by Rober Sprouse and Maurice Moonitz, in 1962.

ARS No. 4 : Reporting of Lease in financial Statements, by John Myers, in 1962.

ARS No. 5 : A Critical Study of Accounting for Business Combinations by Arthur Watt, in 1963.

ARS No. 6 : Reporting the Financial Effects of Price Level Changes by the staff of the Accounting Research Division, in 1963.

ARS No. 7 : Inventory of Generally Accepted Accounting Principlesfor Business Enterprise, by Paul Grady, in 1965.

ARS No. 8 : Accounting for the Cost of Pension Plans by E.L. Hicks, in 1965.

ARS No. 9 : Inter-period Allocation of Corporate Income Taxes by H.A. Black, in 1966.

ARS No. 10 : Accounting for Goodwill, by George Catlett and Normal Olson, in 1968.

- ARS No. 11 : Financial Reporting in Extractive Industries by R.R. Field, in 1970.
- ARS No. 12 : Reporting Foreign Operations of U.S. Companies in U.S. Dollars by L. Lorenson, in 1972.
- ARS No. 13 : The Accounting Basis of Inventories by H.G. Barden, in 1973.
- ARS No. 14 : Accounting for R & D Expenditures, by O.S. Gellein and M.S Newman, in 1973.
- ARS No. 15 : Stockholders' Equity by B. Melcher, in 1973.

Of these research studies, the first and the third are probably the best examples of APB's serious intention to develop coherent set of accounting principles. For example, in ARS No. 1, its author enquired into the basic nature of accounting to develop fourteen essential postulates of accounting around the environment (qualification, exchange, entities, time period and unit of measure postulates) the Field (financial statements, market prices, entities and tentativeness postulates) and the imperative of accounting (continuity, objectivity, consistency, stable monetary unit and disclosure postulates). In ARS No. 3, Sprouse and Moonitz went on to enquire the historical cost base of accounting and suggested that it may be necessary to use both general and specific price level changes instead of historical cost accounting. But both these studies were rejected by the APB on the ground that they are too radical to be accepted for implementation.

The APB instead preferred to rely on ARS 7, inventory of Generally Accepted Accounting principles for Business enterprise, which was nothing more than a compilation of contemporary accounting practices and the existing APB opinions and Accountancy Research Bulletins. Accordingly, Accounting Research Studies continued to be *ad hoc* studies without common foundation to support them. The remaining studies reflected the assumption and findings of the individual author who made the study.

- (iii) **The FASB conceptual framework project** : Conceivably, the APB failed in its mission of developing desired conceptual framework of accounting. The continued existence of alternative accounting treatments for the same economic event coupled with the lack of adequate accounting treatments for new accounting problems unleashed a spate of court cases of fraud and manipulation of accounting results. These were sufficient evidences of APB's failure in its mission.

Amidst this turmoil, AICPA appointed two Committees in 1971 to investigate the situation. The first committee known as the *wheat committee*, was charged with the task of expediting standard setting process. The report of this committee resulted in the creation of Financial Accounting Standards Boards in 1973 as an independent body, which as of August 1992 issued 110 statements of financial accounting standards as part of its main objective.

But AICPA recognised the difficulty of standard setting without agreed statement of concepts and principles. Absence of well defined concepts and principles would cause not only needless waste of time on basic concepts in relation to each individual standard, but it would necessitate a large number of detailed standard on every single issue.

The AICPA to lessen the problem of standard setting, set up a second committee in 1971 under the chairmanship of *Robert Trueblood*, with the specific charge of development of objective of financial statements. The report of this committee provided the FASB the required direction in its conceptual framework project and finally between 1978 and 1985 it published six statements of Financial Accounting Concepts (SFAC) as part of this project :

- SFAC No. 1 : Objectives of Financial Reporting by Business Enterprise, published in Nov. 1978.
- SFAC No. 2 : Qualitative Characteristics of Accounting Information.

published in May, 1980.

SFAC No. 3 : Elements of Financial Statements of Business Enterprise, published in December, 1980.

SFAC No. 4 : Objective of Financial Reporting by Non-business Organisations, published in December, 1980.

SFAC No. 5 : Recognition and Measurement in Financial Statements of Business Enterprise, published in December, 1984.

SFAC No. 6 : Elements of Financial Statements, published in Dec., 1985.

At about the same time of formation of the FASB in the USA as a private standard setting body, institutionally sponsored research studies were also conducted in some other countries on the basic objective and conceptual framework of accounting. Most important of them are, "A statement of Australian Principles" (1970), "Objectives and Concepts of Financial Statements" (1972), and the "Objectives and Basic Concepts of Accounting" (1982) in Australia under the sponsorship of Australian Accountancy Research Foundation, "Corporate Reporting : Its Future Evolution" (1980) in Canada under the sponsorship of the Canadian institute of Chartered Accountants, and the "Corporate Report" (1975) in the U.K. under the sponsorship of the Accounting Standards Steering Committee.

Contribution of Accounting Literature in the Development of Accounting Theory

Much ahead of the institutional efforts, theoretical underpinning of accounting in the literature began as early as in the beginning of this century. Accounting academics and professionals working on their own sought to develop a general theory of accounting.

Charles Sprague in 1907 endeavoured to formulate the "Philosophy of Accounts" where he found an appropriate definition of assets in the "Storage of Services to be Received." Though this definition by itself is not complete, later definition by the APB and FASB are only a shade improvement over Sprague's definition. Henry Rand Hatfield in 1909 edition of his text book, *Modern Accounting* introduced the readers with the concept of deprival value, though under different nomenclature.

O.G. Ladelle, in English Chartered Accountant, in the November 29, 1890 issue of the 'Accountant' magazine made substantial contribution to depreciation theory and convincingly argued that depreciation is a system of cost allocation, not asset valuation. Much later in 1937 Perry Mason published his *Principles of Public Utility Depreciation* where he espoused the basic principles and concepts underlying depreciation. Henry Sweeney in his book, *Stabilized Accounting* (1936) propounded a complete discussion of the adjustments of financial statements for price level changes. In the same year, *A tentative statement of accounting principles affecting corporate reports* was published under the auspices of the American Accounting Association which discussed the "bases upon which accounting standard rest".

The ideas expressed in all these works were much more advanced than accounting practices of that time, but they dwelt upon particular areas of accounting theory and are considered only isolated oasis amidst the sands of vague accounting practices.

A continuum of systematic accounting ideas was however, first expressed in J.B. Canning's *The Economics of Accountancy* which was published in 1929 and where he examined the whole metamorphosis of accounting

to develop a comprehensive concept of income, capital value, and asset.

A proper appreciation of Canning's work can not be made unless this fact is known that before Canning there was no cluster of writings on accounting theory, especially, there was "an astonishing lack of discussion on the nature of income." He thus came to the conclusion that "the accountants have no complete philosophical system of thought about income, nor is there the evidence that they have ever greatly felt the need for one. Their generalisation are too inchoate to permit one to suppose that they have ever seriously put their minds to the philosophical task." This being the case, there would be little prospect of systematic accounting practice, Canning alliterated. Canning's work, however, provided the much needed direction to philosophical orientation of accounting as "accountants only few years later began to codify accounting doctrines" formally.

Developments in the accounting literature from 1940s through 1960s : In the history of the development of accounting literature 1940 is undoubtedly the watershed year because of the publication of *An Introduction to Corporate Accounting Standards* by W.A. Paton and A.C. Littleton under the auspices of the American Accounting Association. Although, the basic theme of the work was expressed in the earlier AAA publication *A Tentative statements of Accounting Principles underlying Corporate Financial Statements* in 1936, and some particular aspect of the work can be traced back to Paton's Ph-D. thesis that was published in 1922 as *Accounting Theory : with Special Reference to Corporate Enterprise*, the final outcome of Paton and Littleton's combined work in 1940 "represents the first attempt to elaborate a coherent coordinated consistent body of doctrines essential to a sound fundamental structure of accounting". Of the six "basic concepts" of accounting espoused in this work (entity, continuity, measured considerations, cost attach matching and verifiable objective evidence) they have championed the cause for matching concept, which is still now regarded as the pervasive principle of accounting.

The parallels of this fundamental work involving the basic nature of accounting can be found in the works of Mattessich and Chambers in the middle of 1960s (as well as in the works of Moonitz, and Sproule and Monnitz in ARS No. 1 and ARS No. 3 respectively).

Richard Mattessich in the ten chapters and over 500 pages of his book, *Accounting and Analytical Methods* (1964) extended the frontiers of accounting to such vital interdisciplinary areas like measurement theory, valuation theory, Management and Behavioural Science, as the basis of a general theory of accounting. He formulated the following 18 basic 'assumptions', which according to him "might be regarded as necessary and sufficient conditions" for accounting :

- | | |
|--------------------------------|---------------------------|
| 1. Monetary Values | 2. Time Intervals |
| 3. Structure | 4. Duality |
| 5. Aggregation | 6. Economic objects |
| 7. Inequity of monetary claims | 8. Economic agent |
| 9. Entities | 10. Economic Transactions |
| 11. Valuation | 12. Realization |
| 13. Classification | 14. Data input |
| 15. Duration | 16. Extension |
| 17. Materiality | 18. Allocation |

Close to the heels of Mattessich's work, R.J. Chambers brought out his significant book *Accounting, Evaluation and Economic Behaviour* in 1966 where he espoused over 13 postulates and definitions as a part of the general theory of accounting.

The other significant accounting works with specific orientation to accounting theory development during the 1960s are : *The Theory and Measurement of Business Income* by E.O. Edward and P.W. Bell in 1961, *A Theory of Accounting to Investors* by George Stabus in 1961, *Accounting Concepts of Profit* by Palle Hensen in 1962, *Income Determination Theory : An Accounting Framework* by Norton M. Bedford in 1965, *A Statement of Basic Accounting Theory* by AAA in 1966, and *The Foundation of Accounting Measurement* by Yuji Ijiri in 1967.

Significant accounting literature during 1970s and 1980s : The most significant event in the evolution of accounting theory during this time is obviously the formation of FASB and its conceptual framework project that resulted in the issue of six statements of Financial Accounting concepts in an attempt to develop fully integrated structures of accounting theory upon which standards may be based. The other major areas of accounting research of this time, according to Hendriksen (P-532) are :

(i) The extension of empirical research into the nature of accounting numbers, (ii) research into the decision making process of the individual, (iii) research into the implications of efficient capital markets theories for accounting etc. No significant book on basic accounting theory related to this time period can be mentioned except Robert Sterling's *Theory of Measurement of Enterprise Income* in 1970 and R.M. Skinner's *Accounting Principles : A Canadian Viewpoint* in 1972, but most of the works on the above mentioned areas of accounting research had been published in various accounting journal like *Accounting Review*, *Journal of Accounting*, *Journal of Accounting Research*, *Accounting and Business Research*, *Abacus*, etc.

There was however, significant development of accounting literature on inflation accounting that could be attributed to this time. The major works in this subject published during that time are : *Replacement Cost Accounting* by Lawrence Revsine and *Accounting Values and Inflation* by William Baxter in 1975, *Current Value Accounting and Price Level Restatement* by L.S. Rosen in 1972, *Accounting for Changing Prices* by James Largay and J.L. Livingstone in 1976 etc.

Social Accounting : The New Frontiers in Accounting Theory

While the decades of 1960s through 1980s saw a tremendous outgrowth of accounting literature in the mainstream accounting theory, a wind of change was blowing silently across the horizon of accounting in the late 60s and early 70s. *The True Blood Committee Report* on the Objectives of Financial Statements in 1973 broke with the traditional orientation of Financial Statements toward reporting on stewardship and instead added socio-economic dimensions to the scope of accounting by stating that "an objective of financial statement is to report on those activities of the enterprise affecting society which can be determined and described or measured and which are important to the role of the enterprise in its social environment".

The view expressed in the True Blood Report was only a formal recognition of social imperative of accounting, but the role of accounting as an information system concerned with effective transmission of information revealing past, present and prospective socio-economic activities was gaining strong ground since the late 1960s. Such a shift of emphasis as well as extension of accounting function emanated from changes in social attitude which viewed business as a social institution and management as having some social responsibility,

to compel accounting goals extend beyond its traditional profit parameters. In fact, it has been widely proclaimed in management literature since the late 1960s that profit motive is no longer the sole motive of many large business enterprises. In consequence, attempts have been made to align profit to other social goals, such as contribution to economic growth, meeting community requirements, public service, human resource development and of late, the concern for environmental disruptions, as a barometer of responsible business behaviour. The outgrowth of accounting literature in the past two decades in the areas of social accounting [*c.f.* Mobley (1960), AICPA Committee on Social Measurement (1977), Ramanathan (1976), Belkaoui (1976), Spicer (1978), Coopers (1972), Owens (1992) and Roberts (1992), to mention only a few] provide evidence that accountants have demonstrated, their care and concern for upholding social objectives in some critical areas of socio-economic activities.

As a corollary, several proposals have been mooted by the accountants as well as the non-accountants, which suggest that accounting profession should expand the current accounting measurements and disclosure model to encompass corporate social responsibility reporting. The forms and contents of corporate disclosure of such socially oriented data have been made the topic of Committee deliberation and reports by the three major accounting associations in the USA in the recent past—the American Accounting Association in 1974, 1975, and 1976, the National Association of Accountants in 1974, and the AICPA in 1972 and 1977.

Social accounting, however, remains an important challenge to the accounting profession since accountants are yet to agree on its scope and methodologies. Further, the nature of the problems confronted by social accounting can not be effectively solved unless it adopts a flexible methodology to break with some of the traditional accounting doctrines, assumptions and conventions.

Accounting Harmonisation and the International Accounting Standards

The emergence of accounting standards in the early 70s is undoubtedly the most significant event in the history of accounting development and corporate financial reporting.

Accounting being the language of business, the need for its application in unique sense has been felt as early as the beginning of the present century. The major research efforts in accounting since the early 1930s was, therefore, in search of united frame of accounting principles and consistency in their application. The search for fully authoritative, integrated principles or theory of accounting that could be used to meet the needs of all users at national and global level has, however, not been successful. Instead, a diversity of accounting practices has developed throughout the world depending upon the school of accounting thought (see Table 2.4) and socio-cultural need of different countries. There are conceptual differences on the one hand, and on the other hand, there are differences that stems from the adoption by different countries of different principles in the matter of recognition of accounting events and phenomena, valuation of assets and liabilities and computation of profits. The differences that arise from these reasons cannot be simply resolved by developing general principles. In fact, the limitation of attempt to develop such general principles of accounting was observed by Paton and Littleton long ago : "Principles would generally suggest a universal and degree of permanence which can not be exist in a human service institution like accounting" Accounting being a multiple paradigm discipline, its needs are bound to vary with socio-economic and cultural variables, viz., the level of accountancy education, economic development, development of capital market, prevailing legal system and finally, the specific needs of the industries.

TABLE 2.4: MAJOR SCHOOLS OF ACCOUNTING*

Basic features	French-Spanish Italian	British	United States	Northern Europe	Soviet
<p>"General Accounting Plan" based on chart of accounts with basic orientation to tax determination</p>	<p>Emphasis on "True and fair view", aimed at protection of investors and creditors</p>	<p>Emphasis on "Generally Accepted Accounting Principles," aimed at protecting the equity shareholders</p>	<p>Emphasis on "Generally accepted commercial principle," aimed at protecting the company; involves hidden assets, under statement of profit and minimum disclosure</p>	<p>Emphasis on physical output as dictated by the Central Planning Authority. Very little resemblance to accounting system of market oriented economies</p>	
<p>Major countries : France, Spain, Italy, Belgium, Portugal, Greece, Turkey, Lebanon, Egypt, Algeria, Morocco, Brazil, Ecuador, Columbia, Peru</p>	<p>India, Pakistan, Hongkong, Singapore, Malaysia Nigeria, Ghana, Kenya, South Africa, Zimbabwe, Barmuda, Bahamas</p>	<p>Canada, Australia, Israel</p>	<p>Mexico, Venezuela, Japan, Philippines, Taiwan</p>	<p>West Germany, Netherlands, Switzerland, Norway, Sweden, Denmark, Finland</p>	<p>Hungary, Poland, Bulgaria, China</p>

* Adapted from : L.J. Seidler and D.R. Carmichael, Accountants' Hand Book, 6th Edn., Ronald Press, P. 40.6

Perhaps, this was one of major reasons that explain the cause of demise of the APB and formation of the FASB in the USA in the early 70s. The FASB instead of developing general principles embarked upon the task of formulating needbased standards. Unlike the principles, the accounting standards are the authoritative statements of how particular types of transactions and other events should be reflected in financial statements and they are directed to the formal rules which cover details of specific situation. The principal advantages of standards are that, being rigidly defined, they inspire conformity, direct performance, and deal with details and choices of alternatives. Accounting standards thus are handy rules that can be used readily and they may be used to disseminate useful information by the accounting entity to the users of financial reports.

This great advantage of accounting standards is the motive force behind the fast development of accounting standards in several countries all over the world. There is, however, one major lacuna in the development of these standards : They are country specific, designed to meet the national requirements. They do not meet the requirements of global community. This problem is now increasingly being felt in a unipolar economic world due to increasing globalisation, where business finance has been cutting across transnational boundaries faster than ever. The growth of multinational corporations and difference in the procedural and disclosure requirements being demanded for listing in the stock exchanges of various host countries has created an urgent need for some kind of common or uniform standards for smooth flow of international finance. The need for harmonisation of accounting practices of different countries has, therefore, emerged as the major issue in accounting in recent times.

As is clear from the above discussions, the term 'harmonisation' carries a wider meaning although, it is sometimes used interchangeably with the term 'standardisation'.

The term harmonisation, according to Nobes and Parker, is a process of increasing the comparability of accounting practices by setting bounds to their degree of variation while standardisation appears to imply the imposition of a more rigid and narrow set of rules.

In other words, harmonisation means not only a process of bringing uniformity by reducing the alternatives and procedural differences, but embraces a blending and combining of the elements of accounting practices of various countries into an orderly structure to create a synergistic effect. It is a formal or 'due process' which requires cooperation among the various political, organisational and professional agencies which carry the weight of formal (or informal) authority.

There are various such agencies which are involved in the task of harmonisation of accounting from limited regional sphere to larger global sphere. Among these agencies – The European Community (EC), The Association of Southeast Asian Nations Federation of Accountants (AFA), The Confederation of Asian and Pacific Accountants (CAPA), and the African Accounting Council (AAC) are the principal organisations engaged in harmonisation endeavour at regional level, while the United Nations (UN), the Organisation for Economic Cooperation and Development (OECD), the International Federation of Accountants (IFAC) and the International Accounting Standards Committee (IASC) are the major organisations which have devoted their mite in the harmonisation effort a global level. The effort and major achievements of these organisations in this respect are discussed briefly.

The European Community [E.C.] : The E.C. which was formed in 1957 by France, West Germany, Italy, Belgium, Luxemburg and the Netherlands with the objective of free movement of capital, goods and service and personnel, is at present a union of 12 countries, after the accession of the U.K., Ireland, Denmark, Greece, Spain and Portugal. It has attempted to foster accounting harmonisation through its various directives and regulations. Since 1971 it has issued four major directives – The Fourth Directive, Fifth Directive, Seventh Directive and Eighth Directive to be implemented by its members in the area of formats of published financial statements, valuation rules, disclosure requirements, consolidation of financial statements and audit procedures.

Association of South East Asian Nations Federation of Accountants (AFA) : Founded in 1977 by five South Asian Countries – Indonesia, Malaysia, Philippines, Thailand and Singapore, AFA has attempted to harmonise accounting and auditing standards and practices in the ASEAN region. So far the association has issued two standards – one each in respect of accounting and auditing. The accounting standard relates

to the fundamental accounting concepts and assumption underlying the financial statements.

Confederation of Asian and Pacific Accountants (CAPA) : This is yet another regional association of the accountants in Asia Pacific region which was founded in 1957 by 31 accounting bodies of 22 countries. The association has not so far issued any accounting standard, but as a part of its long term objective of developing a coordinated accounting and auditing practice, has developed eight course teaching materials for the teachers and practitioners of accounting in this region.

African Accounting Council (AAC) : AAC was founded in 1979 with membership of government representatives of African countries. The major goal of the council is to promote harmonisation of diverse accounting practices which they have inherited from France and England. So far the AAC has not been able to mandate any accounting standard upon its members.

The United Nations (UN) : The UN effort in the area of harmonisation of international accounting practices began as early as the 70s. In 1977 its report on "International Standards of Accounting and Reporting for Transnational Corporations" was published. The report recommended uniform accounting practices by the TNCS in the area of segment reporting, consolidated financial statements and transfer pricing. In 1979 the Economic and Social Council of the UN appointed an intergovernmental group of experts on Accounting and Reporting Standards. The final report of the group published in 1982 recommended a wide array of disclosure in the basic financial statements of the TNCS.

Organisation for Economic Cooperation and Development (OECD) : The OECD effort in the area of harmonisation primarily relates to the accounting and reporting issues by the multi-nationals. In 1976 it developed a voluntary code of conduct for the MNCs relating to the general policies, disclosure of information in financial reports along with a number of social responsibility disclosures. In 1979 a permanent working group on Accounting Standards was set up to review efforts undertaken by its members to reduce diversities in accounting practices.

The International Federation of Accountants (IFAC) : The IFAC was founded in 1977. Because of its acceptance as the spokesman of the accounting professionals all over the world, the creation of IFAC is undoubtedly the most significant milestone in the history of accounting harmonisation. The Federation originally started with a membership of 63 accounting bodies from 49 countries, but over the years its membership has swelled into 123 accounting bodies of 87 countries. It is estimated that, together it represents at least 1.7 million of individual accountants from all over the world. So far the IFAC has not attempted to formulate any accounting standard, instead it has upheld the authority of the International Accounting Standards Committee for setting global standards.

The International Accounting Standards Committee (IASC) : The IASC was established as a private standard setting body in 1973 by Australia, Canada, France, West Germany, Japan, Mexico, The Netherlands, UK, Ireland and the USA having the objective "to formulate and publish in the public interest, basic standards to be observed in the presentation of financial statements and to promote their worldwide acceptance and observance."

The IASC has a multifarious membership including automatic membership for all the members of IFAC who has agreed to support its standards and ensure their compliance in the preparation of financial statements. It has so far published 32 accounting standards in various fields including a conceptual framework in 1989 to serve as a guide to standard setting process :

- IAS - 1 Disclosure of Accounting policies
- IAS - 2 Inventories
- IAS - 3 Consolidated financial statements (Superceded by IAS 27 and 28)
- IAS - 4 Depreciation Accounting
- IAS - 5 Information to be disclosed in the financial statements
- IAS - 6 Accounting responses to changing prices [Superceded by IAS-15]
- IAS - 7 Cash flow statements

- IAS - 8 Net profit or loss for the period, fundamental errors and changes in Accounting policies
- IAS - 9 Research and development costs
- IAS - 10 Contingencies and events occurring after the balance sheet dates
- IAS - 11 Accounting for construction contracts
- IAS - 12 Accounting for Taxes on Income
- IAS - 13 Presentation of current assets and current liabilities
- IAS - 14 Reporting financial information by segments
- IAS - 15 Information reflecting the effects of changing prices
- IAS - 16 Accounting for property, plant and equipment
- IAS - 17 Accounting for leases
- IAS - 18 Revenue recognition
- IAS - 19 Retirement benefit costs
- IAS - 20 Accounting for Government grants and disclosure of Government assistance
- IAS - 21 Accounting for the effects of changes in foreign exchange rates
- IAS - 22 Accounting for business combinations
- IAS - 23 Capitalization of borrowing costs
- IAS - 24 Related party disclosure
- IAS - 25 Accounting for investments
- IAS - 26 Accounting and reporting by retirement benefit plans.
- IAS - 27 Consolidated financial statements and accounting for investment in subsidiaries
- IAS - 28 Accounting for Investments in Associates
- IAS - 29 Financial Reporting in hyper inflationary economics
- IAS - 30 Disclosure in the financial statements of banks and similar financial institutions
- IAS - 31 Financial reporting of interests in joint ventures
- IAS - 32 Financial Instruments : Disclosure and presentation.

With this long list of accounting standards as above in some vital areas of financial reporting, one can reasonably expect that IASC will be able to pave way for harmonisation of global accounting practices. The total commitment of a good number of countries as well as India to the IASC standards corroborates this view. For example, the preface to the Accounting Standards in India clearly states that while formulating accounting standards, the Accounting Standards in India clearly states that while formulating accounting standards, the Accounting Standards Board will give due consideration to IASC standards and try to integrate them, as far as practicable, in the light of the conditions and practices prevailing in India.

Not only that, in case of some developing countries like Singapore, Malaysia, Zimbabwe and Sri Lanka, the search for national standards in these countries has ended with word for word acceptance of the IASC standards. IASC's long march to harmonisation has also gained milage in China, Yugoslavia and erstwhile Soviet Union due to the return of these countries to market economy. IASC's standards in these countries have acted like a 'quick-fix' to make their accounting system compatible to the requirements of the global investors. There are, of course, some impediments which IASC is facing in the process of harmonisation: the superiority of accounting standards in some developed countries such as the USA the UK and Ireland has created a big hiatus which simply can not be bridged with the present IASC standards.

CHAPTER-3

Approaches to Accounting Theory

Introduction

The students of accounting when enter in their career after passing graduation or post-graduation in commerce, they believe that there is a solution to every accounting problem. No, it is far away from the truth because there are many issues remain unresolved after having the knowledge of mere accounting. To become of student of accounting in real sense of the business world one should also concentrate on understanding the problems of accounting practice and profession. For this matter and reason, the accounting theory is recommended. The accounting theory provides the knowledge of Generally Accepted Accounting Principles (GAAPs), Contemporary issues and other developments in the field. In this chapter, the students will be introduced with accounting theory and its main issues like "Theory, process of constructing the theory, need of accounting theory".

Meaning of Theory

Our common perception about theory is divided between two notions. One perception of theory is something which is far removed from reality. We then say, it is possible or it exists only in theory, not in practice. Another perception about theory is the cause-effect relationship that exists behind any event or practice. For example, if a man jumps off the New Empire State Building he will descend on earth at a specified time irrespective of his weight. If he survives his first attempt, but repeats it from somewhere near the centre of the earth from the same height, he would be surprised to see that this time he has descended on earth more quickly than before (we hope he has survived this time also). Why? If he has an inquisitive mind, he may seek explanation which will lead him to the cause-effect relationship. By applying scientific method he may arrive at the theory of the law of gravitation (as Newton did). Then he knows not only the reason of his quick descending, but if he ever wishes to jump off from the same height at another place, he should be able to predict the time of his landing on earth. Our second perception about theory is the employment of scientific method to explain some phenomenon. A scientific method may be defined as a method of explanation that develops and tests hypothesis about how real world, observable phenomena are related. The goal of scientific method is explanation, scientific method strives to develop a systematic body of theory through development of hypothesis. Thus, theory may be described as "a cohesive set of hypothetical, conceptual and pragmatic principles forming a general frame of reference for a field of study."

Definition of Theory

In the field of science, including social science, one may encounter a host of views about 'Theory', which has a Greek root, 'Theoria' meaning to "behold or view". A popular definition given by Kerlinger defines theory as "a set of interrelated constructs (concepts), definitions and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena".

Arnold Rose's view is similar to the above statement. He defined theory as "an integrated body of definitions, assumptions and general propositions covering a given subject matter from which a comprehensive and consistent set of specific and testable (principles) can be deduced logically".

There are other views which state theory as "a set of interrelated concepts at a fairly high level of generality".

The Process of Theory Construction

A theory, according to the definition of *Webster's Third International Dictionary*, provides "general frame of reference for a field of enquiry". It does not however, give specific prescription for a specific problem. Social Science is not concerned with isolated events, but with the commonality of a series of problem. The process of generalisation is arrived at through the following stages :

- (i) **Observation** : There are many disputes over the way in which theories are constructed. But the construction of most of theories, as also the "laws of nature", begins with observation of the phenomenon. We all know the study behind Newton's discovery of the law of gravitation. He observed the phenomenon

that all objects tossed up come down. This provoked his inquiry which ultimately led to the cause.

- (ii) **Defining the problem** : Careful definition of the problem will provide objectivity or a track through which inquiry may be conducted. If identification of problem is wrong or imprecise it would be very difficult to reach meaningful conclusions. It may be observed that the objective or goal of accounting is not rigorously defined. As a result, until now there is no comprehensive theory of accounting.
- (iii) **Formulation of hypothesis** : "Science is a method of approach to the entire empirical world, *i.e.*, to the world which is susceptible of experience by man", that we call a hypothesis. It is the preliminary assumption adopted for the explanation of a phenomenon. It is formulated before empirical evidences or facts are gathered.
- (iv) **Experimentation or testing the hypothesis** : A hypothesis established around the preliminary assumption must be tested for probable conclusions. It is important to select the appropriate method for testing the validity of hypothesis.
- (v) **Verification** : The final stage in the formulation of theory is generalisation through verification. If the observed phenomenon after repeated trial or experimentation produces the desired result the hypothesis is then said to be confirmed, the logical consistency of the hypothesis is generalised to formulate a theory "Scientific theories provide certain "expectations" or "predictions" about phenomena and when these expectations occur, they are said to "confirm" the theory. When unexpected results occur, they are considered to be anomalies which eventually require a modification of the theory or the construction of a new theory. The purpose of the new theory or the modified theory is to make the unexpected expected, to convert the anomalous occurrence in to an expected and explained occurrence".

Characteristics of a Good Theory

A good theory should fulfil the following criteria :

- (i) It should explain or predict phenomena, *i.e.*, they should be empirical.
- (ii) Theories should be capable of being tested empirically. Theories which fail tests are not of universal applicability, therefore, must be replaced by better or non refutable theories.
- (iii) Theories should be consistent both internally and externally. Internal consistency is present when the analytical properties of theory ensure that the given theory predicts the same outcome in every identical case.
External consistency implies that the theory should be consistent with theories in other disciplines.
- (iv) A theory should be exhaustive so as to cover the full range of variations relating to the nature of the phenomena is question.
- (v) Theory should be helpful in providing guidelines for research into empirical problems.

Accounting theory and its nature : Accounting Theory is the organised body of knowledge which deals with order, reasons, relationships, objectives and methods involved in the practice of accounting.

Hendriksen, however, used the definition of the *Webser's Third International Dictionary* as the basis to define Accounting Theory. Thus, according to Hendriksen, "Accounting Theory may be defined as logical reasoning in the form of a set of broad principles that : (i) provide a general frame of reference by which accounting practices can be evaluated, and (ii) guide the development of new practices and procedure. He further states that accounting theory may be used to explain existing practices to obtain a better understanding of them.

Both the definitions of accounting theory given above underpin the use of theory as a guide to accounting practices. But the fact is that there has been a concurrent development in accounting. While accounting was developing as a practical art, it was also evolving a body of theoretical premises. The theoretical evolution of accounting is of recent origin, though its practical development can be traced back five hundred years ago. Both the theoretical and practical approaches have contributed to the existing organised body of knowledge, presently known as accounting theory. Their approaches are different, but the purpose is the same : to develop systematic accounting practices.

Under the practical approach, accountants have frequently relied on trial and error as a means to improving

accounting practices. But both the theoretical approach and practical approach are interested in developing some general principles and procedures for dealing with the same real world phenomena of business transactions and events.

Figure 3.1. is a diagrammatic representation of the development of accounting theory and accounting practices.

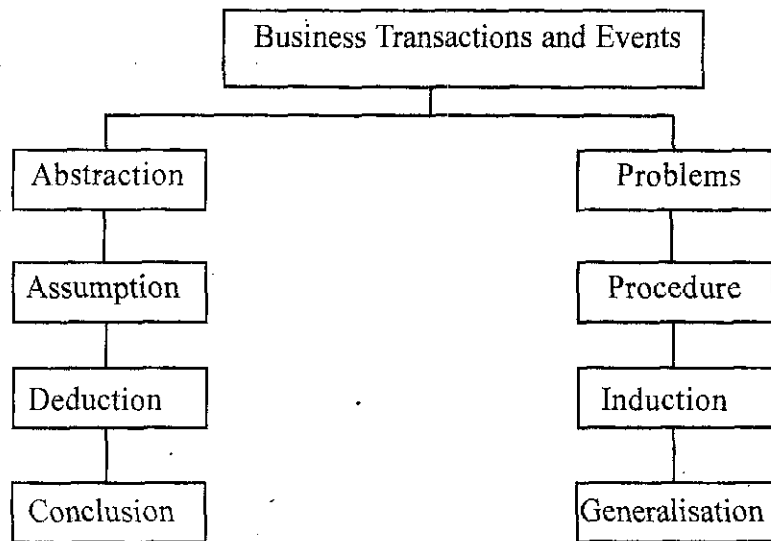


Fig. 3.1. Development of Accounting Theory and Accounting Practices

Source : Frank J. Imke, op. cit.

The development of accounting practices which employs a problem solving approach is shown in the right hand side of the diagram. As particular problems occurred in dealing with individual business events practicing accountants would look for separate procedures to solve these specific problems. "The history of accounting practice consists of a problem procedure evolution the development of new, or modification of old, procedures as different problems occurred".

In other words, the approach adopted in the development of accounting practice can be epitomised as, "Accounting is what accountants do".

The development of accounting theory, which has taken place concurrently with that of accounting practice is shown in the left hand side of the diagram. The first step in the development of accounting theory is abstraction from the real world of business transactions to make some assumption about them. From these assumptions conclusions can be developed about accounting activities through deductive logic. This procedure would suggest "Accounting is what accountants should be doing".

Descriptive and normative theories : From the foregoing it appears that accounting theory can be extracted from the practice of accounting (*i.e.*, the practical approach) or it can result from a logically derived process through the deductive approach. The difference is not one of purpose, rather the difference is due to adoption of different methodologies. "The divergence of opinions, approaches and values between accounting practice and accounting research have led to the use of two methodologies, one descriptive and the other normative."

- (i) **Descriptive theories :** A descriptive theory describes a particular phenomenon as it is, without any value judgment. For example, if you jump from The New Empire State Building, a descriptive theory will tell you when you will descend on earth, it will not tell you whether you are right or wrong in doing so.

The practical or conventional approach to accounting theory is essentially descriptive in character. Such descriptive theories are concerned with the behaviour of the practicing accountants and what they do. This approach emphasises accounting practice as the basis from which to develop theory. Under the descriptive view, accounting theory, therefore, is "primarily a concentrate distilled from experience". The prominent examples of descriptive accounting theories are the works of Paul Grady, *An Inventory of Generally Accepted Accounting Principles for Business Enterprise*, Sanders, Hatfield and Moore, *A Statement*

of Accounting Principles, Stephen Gilman, *Accounting Concepts of Profit*, A.C. Littleton, *Structure of Accounting Theory*, and Yuji Ijiri, *The Foundations of Accounting Measurement*.

- (ii) **Normative theories** : The essential feature of Normative Theory is the existence of value judgement. Normative Theories tend to justify what ought to be, rather than what it is. It imposes on the accountants responsibility of determining what should be reported rather than merely reporting what some one else has requested. The outstanding examples of normative accounting theories are the works of J.B. Canning, *The Economics of Accountancy*, W.A. Paton, *Accounting Theory*, Henry Sweney, *Stablized Accounting*, Kenneth McNeal, *Truth in Accounting*, Edwards and Bell, *The Theory and Measurement of Business Income*, and Sprouse and Moonitz, *A Tentative Set of Broad Accounting Principles for Business Enterprise*.

The roots of accounting theory : The development in accounting theory has been influenced by the technological changes and advances in knowledge in many other related disciplines. The major disciplines which have influenced such development are :

1. Decision Theory
2. Measurement Theory, and
3. Information Theory

These three disciplines are perceived to be the roots of accounting theory.

1. Decision theory : The essence of this theory is that decision-making is not an intuitive process but a conscious evaluation of the possible alternatives that leads to best result or optimises the goal. It is a logical sequence that involves the following stages :

- (i) Recognition of a problem that needs decision,
- (ii) Defining all the possible alternative solutions,
- (iii) Compiling all the information relevant to these solutions,
- (iv) Assessing and ranking the merits of the alternative solution,
- (v) Assessing the best alternative solution by selecting that one which is most highly ranked and,
- (vi) Valuing the decision by means of information feedback.

Decision theory is both descriptive and normative. As a descriptive process it attempts to explain how decisions are made, while as a normative process it suggests which decision is to be made.

The significance of decision theory as a central construct of modern accounting theory becomes apparent from the FASB objectives and qualities of accounting information and the True Blood Committee Report that came down heavily in favour of decision usefulness of accounting information. But much earlier in 1966, *A Statement of Basic Accounting Theory* by the AAA foresaw the role of accounting information for such decision usefulness to the managers, creditors and the investors.

With decision theory accounting can not be viewed as a discipline with practically no interaction with other operating functions of the business. In fact, accounting functions are intertwined with managerial analysis because, as an information system it provides significant meaningful information about the firm both for internal management use and external financial reporting.

2. Measurement theory : There is a clear relationship between accounting and measurement theory. Such relationship has been subjected to extensive analysis by the eminent writers like Chambers, Ijiri and Mattessich. Accordingly, accounting has been defined as a measurement discipline that pertains to "the quantitative description and projection of income circulation and of wealth aggregates" in explicit monetary terms.

Thus, although the term measurement has been typically defined as the assignment of numerals to objects or events according to rules in relation to accounting measurement implies financial attributes of economic events that we call accounting valuation.

Measurement theory is normative in character. Therefore, accounting as a measurement discipline requires specification as to the following :

- (i) **The events or objects to be measured** : This is of paramount importance because, the "identified relationship between accounting and measurement theory would allow ... to convey clearly the objectives of accounting ..." This indicates that the identification of accounting property would allow us to explain

more clearly and consistently the purposes, procedure, limitations and theoretical foundation of accounting.

- (ii) The standard or scale to be used : One of the fundamental properties of measurement theory with respect to assigning numerals to objects or events is that they must be related to a common numerical relational system. For example, if we assign 3 ft. to represent the length of an object, we must assign the same common scale to another object so as to make them amenable to addition and subtraction. This additivity, as Chambers suggests, is the key to accounting measurement.

In accounting, money is the most common unit of measure, not because that it is convenient but due to the ability of monetary unit to attach common significance to diverse events and objects which are subjected to accounting measurement.

3. Information theory : The dominant nature of accounting lies in an information communication system. More precisely, accounting is an application of the general theory of information to the efficient economic operations. The significance of information theory to accounting lies in the fact that it is a part of the decision-making process that reduces uncertainty and thereby provides a means to improve the quality of decision. Information theory in particular can help accounting to resolve certain important issues such as : What is an information ? What is the relationship between information and data ? What should be an accounting information and what should be the system or systems by which to communicate the information ?

The term 'information', however, is not easy to define in view of the psychological overtone or personal attitude implied in the term. But accounting being a measurement discipline as well as an information communication system, we can define information as a data that adds to the receiver's knowledge, reduces uncertainty, and communicates a message to influence the user's behaviour in his decision-making process. In short, when the receiver of a data reacts to it, it is said to carry information. A data is thus distinguished from information. According to Bedford, however, a data becomes accounting information only when it is measured and is bounded by the criteria of relevance, verifiability, freedom from bias and quantifiability. The terms, relevance, verifiability, freedom from bias and quantifiability may be regarded as the attributes that provide internal boundary of the accounting information. Under this theory, information is regarded as a resource, the collection, processing and transmission of which involve a cost. Such costs accelerate with the increase in the volume of information. It is, therefore, important to associate the process of information generation with the economics (*i.e.*, costs) associated with it. Only this criterion can help us to consider the optimal level of information supply by measuring cost of information supply in relation to its benefits to the users.

Approaches to the formulation of accounting theory : Richard Mattessich at the beginning of chapter 1 of his magnum opus, *Accounting and Analytical Methods* makes this observation : "Modern Accounting is a mode of thought, a manifestation of our Charismatic thinking and evaluating, a tool designed to help master our economic struggle. It unfolded in its full breadth during the last hundred years and can not be regarded as having exhausted its potential of technical as well as intellectual growth".

Such intellectual growth of accounting is amply manifested in the numerous approaches that relate to the attempts to accord theoretical support for this discipline. The major such approaches, which range from trivial to sophisticated theories, have been identified to be the *traditional approaches*, as comprising:

A. Non-Theoretical (Informal) approach :

1. Practical
2. Authoritarian

B. Theoretical (formal) approach) :

1. Inductive
2. Deductive
3. Ethical
4. Sociological
5. Mathematical (axiomatic)
6. Economic

C. Eclectic or Combination approach and New approaches Comprising :

1. The Events Approach
2. The Behavioural Approach, and

3. The Predictive Approach.

Practical approach : The practical approach is also referred to as the 'pragmatic approach', though it does not fully employ the formal rule of the pragmatic school of logicians. Yet, this approach constitutes an important part of theory in accounting because "it enables the theory to have operational utility, based on an understanding of relations between business phenomena, of constraints on the measurement system, and of the needs of users of accounting information"

The practical approach is essentially a problem solving approach. Its primary objective, as can be seen from the most of the "generally accepted accounting principles", is to find a workable solution to a problem. As a result, any solution obtained through this approach should be viewed as a tentative solution to problems.

Authoritarian approach : This approach is sometimes equated with the practical approach because of the common methodology its theoretical grounding based on operational utility under the stamp of approval of the regulatory bodies. "The role of authoritarianism is to discriminate between well-founded but conflicting theories (given on the state of knowledge at the time). A practice which appears appropriate in given circumstances should be authorised for use by practitioners". A good example of the authoritarian approach is the ARS No. 7 [An inventory of Generally Accepted Accounting Practice for Business Enterprise] of the AICPA, which is nothing more than compilation of contemporary accounting practices in the USA.

Inductive approach : The inductive approach is least theoretical in nature because of its basic premise that "accounting is what accountants do, therefore, a theory of accounting may be extracted from the practices of accountants". This approach in consequence depends on observations to reach conclusions. Here, unlike the deductive approach, the process is "going from the specific to the generalisation". In other words, some specific observations about financial transactions will be made. If recurring relationships are found among the transactions, generalisation and principles can be formulated (See diagram below).

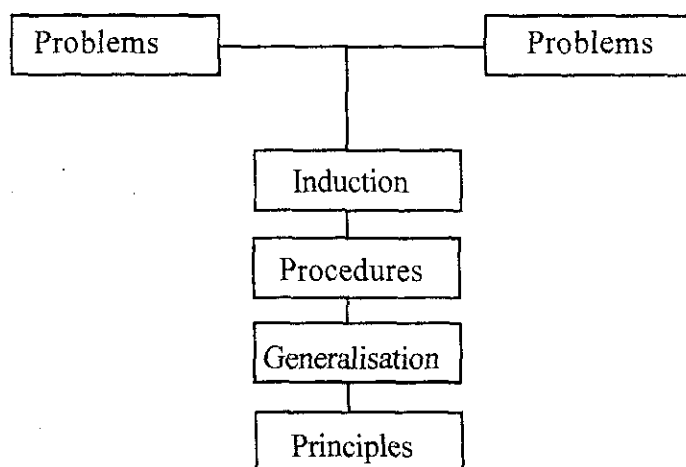


Fig. 3.2. Inductive approach to the formulation of Accounting theory.

Inductive approach is backward looking, it depends on the past accounting practices to seek solution for emerging problems. In that sense, this is pragmatic or practical approach, as most of the current "generally accepted accounting principles" are. They have not been derived from the accounting environment, objectives and basic features of financial accounting. The inductive approach is, however, expeditious and utilitarian, but one trouble with this approach is that every solution to emerging problem may not be found in the past accounting practices. Further, the accounting environment on which past practices are built may change due to changing socio economic factors. In this case the utility of the 'Theory' would be reduced considerably.

Deductive approach : The deductive approach to the development of accounting theory begins with establishing the objective of accounting. Under this approach accounting techniques and practices are linked to the objective of accounting which is derived from the accounting environment. Once the objectives are established, certain key definitions and assumptions (e.g., concepts, postulates) etc. must be stated. Development of

specific accounting practice and techniques would be the last step in the ladder of deductive approach, as shown in diagram below :

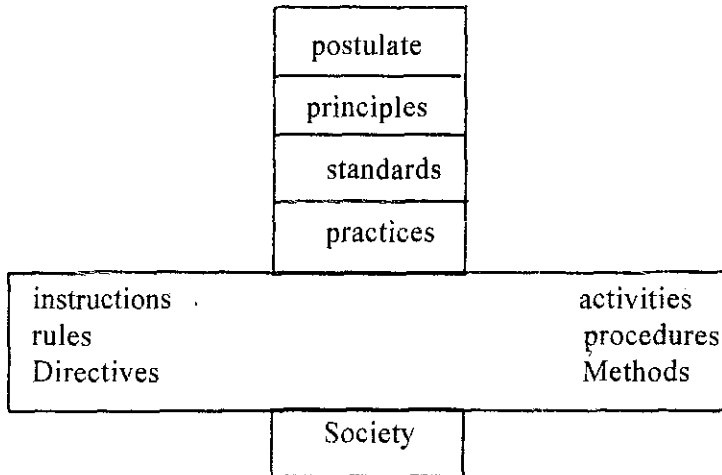


Fig. 3.3. Deductive approach to the formulation of Accounting Theory

Source : Frank J. Imke, *op. cit.*

As can be seen from the diagram, in a deductively derived accounting theory, the techniques and procedures of accounting are related to the principles, postulates and objectives in such a logical sequence that if they are true the techniques and procedures must also be true.

The validity of deductive approach, therefore, is dependent on correct identification of accounting objectives related to the accounting environment. Put in other way, to the extent identification of objectives and environment are in error, the conclusions reached will also be in error. The best known examples of deductive methodology of accounting theory are the works of Maurice Moonitz (The Basic postulates of Accounting) and Robert Sprouse and Maurice Moonitz (A Tentative set of broad accounting principles for Business Enterprise). Other writers who have used deductive methodology include Cannig, Sweeny, McNeal, Alexandre and Edward and Bell.

Ethical approach : The ethical approach does not constitute a major theoretical underpinning, though it certainly reflects a paradigmatic change in the accounting objective that were taking place in the USA and elsewhere. During the after the Second World War the erosion of social values brought into focus the ethical need in the objectives of accounting. D.R. Scott, S.C. Yu, J.W. Patillo, F.J. Imke and others saw ethics as the basis of accounting theory, with justice, fairness and truth being the parameters of financial reporting. Imke Opined that "Accounting exists to serve society by recording, interpreting, and otherwise effectively utilizing financial and other economic data. According to him, accounting, therefore, should be based on the following three criteria:

- (i) The practice of accounting must provide equitable treatment of all interests concerned,
- (ii) Accounting information must be truthful.
- (iii) Accounting must reflect an impartial and unbiased representation of the economic facts.

The ethical approach has instantaneous appeal, but the principal limitation of the approach is that though no one would argue against the concepts of truth, fairness and justice as a desirable feature of accounting theory, these are subjective value judgements having no definite yardstick to measure them.

Sociological approach : The centre of gravity of the sociological approach to accounting theory is reflected in the proposition that "accounting has the responsibility to "transcend the internal viewpoint of a private firm and develop information which portrays a private firm's role in and contribution to society". The plank of this approach is further strengthened by this argument that business being a subsystem of the wider social system, ultimate usefulness of accounting depends on the good it can do to the society and not in the services rendered to individuals.

Sociological approach to the formulation of accounting theory thus calls for an assessment of the accounting techniques and policies *vis-a-vis* their impact on the society. Its suggested dimensions, among others, include internalizing the social cost and assessment of social benefits arising from the activities of the private firms,

disclosure of socially oriented data to assess a firm's relative role and contribution to the society. In short, under this approach the techniques of accounting should be directed to the development of information for decisions that result in the efficient utilization of resources, the conservation of the environment and equitable allocation of business income as an effective means of maximisation of social well-being.

The sociological approach to the formulation of accounting theory is believed to be the precursor to the evolution of societal or socio-economic accounting, an important subdiscipline of accounting that emerged during the 1960s. The main objective of socio-economic accounting is to assess the impact of the economic activities of the private firms on the society at large by developing indices for the measurement, internalization and disclosure in the financial statements the ultimate social costs which are not included in the traditional cost structure of the firms. The techniques of socio-economic accounting are yet to reach its stage of maturity and the traditional accounting measurements are found insufficient. It has been suggested that to solve the problem, accounting techniques should be flexible and it should encompass other nonmonetary measurements which are presently beyond the scope of traditional accounting.

Mathematical (axiomatic) approach : The mathematical approach to the formulation of accounting theory culminates in the axiomatic formulation of its contents to grasp the logical structure of accounting. In this approach, "mathematical symbols are given to certain ideas and concepts. The frame work is provided in the form of mathematical models utilizing matrix algebra on symbolic logic" such that the logical part of the theory can be abstracted and studied in isolation from the **empirical** part of that theory. In other words, mathematical or axiomatic approach is a variant of the deductive approach that provides techniques for summarising the basic proposition of accounting (postulates, concepts and other observable phenomena) in the abstract language which is amenable to mathematical operations and independent proof.

Example of the use of such axiomatic method are found in the works of Mattessich, Chambers, and to some extent, in the works of Ijiri.

Economic approach : While the ethical approach focusses on the concept of fairness and sociological approach on the concept of 'social welfare', the economic approach to the formulation of accounting theory emphasises the macro and micro economic welfare of the affected parties arising from the proposed accounting technique. Such considerations were, however, given little attention in the formulation of accounting theory under the traditional approaches discussed above. In fact, accounting techniques in different countries remained neutral to economic impact, although in Sweden attempt is generally made to balance accounting policies with other macro economic goals.

Beginning with 1970, however, increasing attention was being given to the economic consideration while formulating accounting standards.

Rappaport, Buckley, Horngren and the FASB investigated the social and the economic effects behind the proposed accounting standards, or more precisely, "the economic consequence of Financial Accounting Standards". It appears that the choice of a particular accounting technique cannot be neutral, but must also consider the 'economic reality' and the 'economic' consequence of the proposed accounting technique.

In fact, economic consequence is a pervasive consideration which was given due importance in the choice of accounting techniques in the past without any explicit reference to the 'Economic Approach'. For example, The widespread use of the LIFO method of inventory valuation by the US companies since 1940s did not emerge out of any 'theoretical' considerations but as a guard against adverse economic effects of FIFO method on corporate earnings in the prevailing inflationary condition.

A formal economic approach, however, provided the major theoretical arguments for certain accounting reforms like inflation accounting and replacement cost depreciation that was proposed during the 1970s.

Eclectic or combination approach : While in a purely deductive approach the objective is to develop a statement of basic accounting theory based on "cohesive set of hypothetical, conceptual and pragmatic principle" to form a general frame of reference for the study and practice of accounting, the inductive approach is characterised by operational utility based on observable relations among isolated economic events as the basis of this theory. Both these approaches have their relative merits and demerits. R.K. Storey thus observes, the practical approach for the formulation of accounting theory has created almost as many problems as they have helped to solve. The exclusive use of conceptual approach, on the other

hand, has been equally ineffective. Although this method has fared better than the practical approach from the stand point of internal consistency, it had almost no influence good or bad on accounting practices. Implied in the observation of Storey is the suggestion to use an eclectic approach to the formulation of accounting theory. Eclectic approach does not profess commitment to any particular methodology; it is mainly the result of numerous attempts by individuals, professionals and other agencies [AICPA, AAA and the like] to remove the deficiencies of other approaches. Such an approach is particularly useful in the absence of a universally accepted accounting theory.

Events approach : The events approach to the formulation of accounting theory was first proposed by George Sorter, as an alternative to the value approach to accounting which was endorsed by the majority of the members of the AAA committee that issued "A statement of Basic Accounting theory" in 1966.

The principal argument used in favour of the events approach is that, due to wide ranging use and heterogenous users of financial statements, accountants should not direct the published financial statements to specified 'assumed' group. Furthermore, accounting information on the basis of value approach can contribute little directly to an understanding of the user's utility preference function, since his goals result from a complex of personal and social values that can not be identified in the financial statement.

The tenor of the approach thus suggests that, an event, being defined as an occurrence, phenomenon or transaction, has better semantic interpretation than value measurement, and the information need of the great variety of users can be better fulfilled by providing information about the events without having to aggregate the assign weight (*i.e.*, value) to the data generated by the event.

The function of aggregating and putting weights to the events should be better left with the users in conformity with their utility function.

Given this argument, the events approach suggests expansion of accounting data in the financial statements.

The limitations of the events approach, however, are the following :

- (i) Events approach presupposes that the users are sophisticated enough to be able to classify and aggregate accounting data for their own use.
- (ii) Events approach does not explicitly mention which data are to be selected for the financial statements.
- (iii) There is definite limit to the amount of data a person can handle at a time. The expansion of data may cause information overload to the users.

Behavioural approach : As a corollary to the measurement and information theory, if we are to define the objective of accounting process to be the production of numbers that possess information content directed to the users, we should also make evaluation of the user's economic and psychological reaction to the accounting information given under alternative combinations or conditions. This psychological cognate of accounting information, which is amiss in the traditional approaches, have come to be known as the behavioural approach to the formulation of accounting theory. The behavioural approach is concerned with direct evidence of user's reaction to accounting reports as a basis for descriptive generalisation about the behavioural aspects of particular accounting techniques and problems such as (1) The adequacy of disclosure, (2) The usefulness of financial statement data, (3) Attitudes about corporate reporting practices, (4) Materiality Judgements and (5) The decision effects of alternative accounting valuation bases. The behavioural approach is essentially "descriptive rather than normative and in the usual application does not contemplate changing user behaviour", it only identifies user's behaviour.

Behavioural approach is relatively new in accounting and is still considered to be at the stage of infancy, but some important empirical research in the area [such as those by Dykman, Gibbins, Swieringa and Horngren] which systematically studied user behaviour when they are given alternative accounting procedures in varying combination, have contributed substantially to our knowledge of the effects of such alternatives.

Predictive approach : Under the traditional approach accounting measures are generally used for non predictive purposes e.g., accountability and reporting on stewardship. In the predictive approach however, accounting measures are not just considered as post-mortem exercise. In fact, accounting information is decision oriented that permits prediction of future objects or events. This predictive ability of accounting information has been considered by the SFAC No. 2 of the FASB as an explicit criterion of the quality of accounting information. But much earlier in 1968 Bever, Kennelly and Voss had demonstrated the utility

of predictive approach in relation to the difficult problem of evaluating alternative accounting measurement. According to them, when confronted with the choice between measurement alternatives, "the measure with the greatest predictive power with respect to a given event is considered to be the 'best' method for that particular purpose". The predictive approach is directly related to the 'predictive ability' of financial data and is purported to provide a purposive criterion to relate the function of collecting financial data to the task of decision-making.

Relationship between accounting theory and accounting practice : Accounting theory and accounting practice are not mutually exclusive things, they pertain to the same real world phenomenon of economic transactions. Therefore, conclusions developed from accounting theory should be same as the generalisation developed from the study of accounting practice. Theory is important to the development of accounting because to be meaningful, practice must be based on logic. On the other hand, accounting is an utilitarian device for solving everyday economic problems of business. Therefore, a theory would be judged good in the long run if it improves usefulness of accounting.

Ideally, a sound practice should always conform to a theory, and at the same time, theory should be based on common sense and relate to the existing business world. In that sense, theory and practice should serve as a check and balance to each other.

But unfortunately, present accounting practices are not based on such ideal conditions. We have already seen that accounting theory and accounting practices are based on different methodologies. Whereas accounting theory is based on logic oriented deductive approach, accounting practices are based upon a process of inductive reasoning which consists of making observations and drawing generalised conclusions from a limited number of observations. This approach emphasises the behaviour of practicing accountants rather than the behaviour of real world phenomena. Since accounting practice is characterised by practical approach, it can not be free from personal bias of the practicing accountants. A good theory, on the other hand, would strive to eliminate such bias. Besides, consistency is another factor that distinguishes accounting practice from theory. As a good number of inconsistencies are noticed in accounting practice, and they are permitted by the "generally accepted accounting practice", they are responsible for significantly divergent reported income. This inconsistency did not escape the attention of Canning who stated that, "Accountants have no complete philosophical system of thought about income, nor is there evidence that they have ever greatly felt the need for one. The generalisations are too inchoate to permit one to suppose that they have ever seriously put their minds to the philosophical task".

A few examples of inconsistency in accounting practice : A classic example of inconsistent accounting practice is found in the valuation of inventories. The generally accepted accounting principles regarding inventory valuation is lower of cost or market price, though there is little theoretical justification (from the objectivity points of view). The practice is deeply entrenched into accounting practice "From the desire on the part of creditors for an inventory figure on the position statement reflecting the liquidation value of the assets. Not only this, the meaning of cost has different connotations like LIFO, FIFO. As a result different accountants may adopt different methods showing different income and inventory figures. Other inconsistent accounting practices include varying depreciation methods, treatment of know how expenditure and treatment of gratuity.

In view of the prevalence of such alternative practices Spiller argues that such practices are not logical, nor even internally consistent. Thus, the generalisations that arise out of accounting practices are, in many cases, not descriptive of the whole accounting practice. Spiller describes such generalisation as "poor generalisation with little rhyme or reason for the differences".

Accounting theory in transition : Prof. G.D. Roy observed that the last words about accounting theories have not been said. Neither have we heard the last words about physics, chemistry or medicine. There is continuous developments in all the fields of science. Accounting too, has at least some element of science in it, though its roots are embedded in the practitioners' art. But was not all other field of science a toddler at the beginning ? Was not chemistry a vagaries of alchemy or biology a weird collection of errors at the beginning ? Today, nobody would dare to dismiss them as a nonsense science. The same can be said of accounting. The scope and methods of accounting are also changing and can be expected to continue to change in future. Such observations were made by many scholars like Bedford and Glutier

and Underdown. At the very beginning of their book, Glauter and Underdown made this observation that, "Accounting is in an age of rapid transition, its environment has undergone vast changes in the last two decades and the accelerating rate of change is in prospect for the future".

The secret of this development lies in the desire of the accounting professionals to see their profession in the ornate discipline of science, encompassing not only economic interests of individual, but also encompassing social behaviour of group of men related to such economic interests. Such integrated approach to accounting can not bypass the great changes which are occurring in measurement techniques, the behavioural science and advances in computer technology. It may be noted that accounting has been already profitably utilizing a great variety of measurement techniques such as computer simulation, statistical analysis and other measurement methods which did not originally belong to its domain.

The developments in the discipline of economics have also greatly influenced accounting. With the introduction of the concept of externalities in the economic literature by Prof. A.C. Pigou in 1960, accountants have attempted to incorporate his concept in their discipline as a new dimension of socio-economic accounting. "The recognition and measurement of external diseconomies, or social costs, and the resulting implications for the accounting profession". It is highly probable that accounting in future will assume a lead role in measuring social costs for maximisation of social well-being that Pigou saw in resolving the conflict of "divergence between social and private net product". These developments suggest that accounting will become more of a normative science in future. It is also possible that accounting will merge with other disciplines to create a new information profession.

The wind of change which is blowing across the horizon of accounting will undoubtedly call for new structure of accounting theory in future. The dynamic nature of accounting theory in future will include broader scope for accounting to measure and communicate data on past, present and prospective activities of all types in order to improve control methods and decision-making at all levels.

Advantages and limitations of accounting theory : The advantages and limitation of accounting theory has been best summed up by Monitz who says that accounting theory "cannot solve all the problems the profession faces anymore than the "laws" of physics can build a bridge, but they can give the frame of reference it must have".

Similarly, it may be observed that a large part of accounting practice depends upon judgement related to particular circumstances. Therefore, a theory with prior determination of objectives or goals may suffer from limitations due to changes in business environment.

There seems to be logic both in favour and against theory. Yet, at the risk of over simplification, one way may that theory provides the foundation for practice; theories are constructed to explain and give meaning to practice; without the foundation of theory is like a building standing upon sand. "If we develop accounting with no more foundation than arbitrary assumptions, who will dare rely on it ?"

Below is given some of the clearly identified advantages of theory :

- (1) **Identification of problem area :** Accounting Theory narrows the range of problem area by clearly identifying the facts to be studied. It helps select the relevant aspect of a phenomenon.
- (2) **Conceptual frame :** Accounting theory provides a conceptual framework or, as put by Hendriksen, it gives a general frame of reference for the study of accounting problems. This frame of reference actually provides the standard with respect to which accounting practice may be evaluated.
- (3) **Summarisation :** Accounting theory as an organised body of knowledge summarises concisely what is already known about the subject. As can be seen from the bulletins of the AICPA, many of the current accounting theories are actually summarisation of current accounting practices.
- (4) **Uniformity of practice :** One of the goals of accounting theory is to provide uniformity in practice. The contemporary 'Generally accepted accounting principles' are primarily a cluster of current accounting theories on existing practices in the grab of theories. It aims at providing uniformity in accounting practice, the lack of which will greatly reduce credibility of accounting.
- (5) **Predictive ability :** An obvious advantage of accounting theory is its predictive ability. Theoretical generalisations can be used to predict further facts. Due to this predictive ability of accounting theory, a growing body of empirical research has evolved that can be used for decision making by

the users. Examples of such predictive model in accounting, among others, include prediction of earnings, corporate failure risk associated with equity or bond, and capital market reactions.

- (6) **Development of new practice :** Accounting operates in a dynamic socio-economic environment. Therefore, with the change in social attitude, economic reality and improvement in information science it may be necessary to replace the existing practice by new one. For example, requirement of huge capital for fixed assets during the rail road developments in the UK and USA created the need for depreciation accounting based on historical cost. But the economic reality in a persistently inflationary condition has forced the accountants to propose for replacement cost depreciation.

Limitations of Accounting Theory

- (1) Accounting theory does not explain all its practices. Due to the utilitarian nature of accounting, many of the conventions and principles of accounting have been constructed on the basis of expediency rather than as rules of logic.
- (2) Littleton and Zimmerman argued that accounting is not as strongly oriented toward logical argument as towards utilitarian service. It is less concerned with deductive generalisation than with practical accomplishments.
- (3) The concepts and postulates of accounting theory are not rigorously defined. Some of the fundamental assumptions of accounting theory are not realistic, e.g., the assumption about stable value of money.
- (4) Unlike the theories of pure science, accounting theory suffers from internal consistency. For example, according to the entity concept, which is a basic postulate of accounting, accounting statements should be prepared to represent the activities of the entity rather than the groups connected with it. But in many cases the tenet of the concept is violated e.g., the net income is defined as net income of the shareholders instead of those to the entity.
- (5) The practical nature of accounting does not lend itself to have a general theory of accounting, such that a high level of generality makes it possible to be applied to all countries, to all industries and all firms. For example, generally accepted accounting principles in the USA and India are not the same due to different socio economic conditions.

CLASSIFICATION AND ACCOUNTING THEORY

A taxonomy is a classification designed to aid the analysis and interpretation of a field of inquiry. A classification of accounting systems should be of value in many ways :

- By sharpening the focus of description and analysis
- By assembling a mass of data in a form suitable for explanation
- By permitting the isolation of critical factors which must be considered in setting accounting standards

By adaptation, a good taxonomy becomes a predictive tool, enabling the analyst to determine probable outcomes of decisions to change a system. More importantly, a taxonomy should lead to the development of models which permit inferences to be drawn from changes in causal and modifying factors to changes in accounting system.

Classification in accounting has only recently begun to consider the theoretical implications of taxonomy. The most frequently encountered classification of accounting systems, into financial, tax, managerial, cost, government, and so on, lacks the qualities of an efficient classification in that the classes are not mutually exclusive.

The role of classification in financial accounting appeared to be well understood and generally agreed until recently. In the area of practice there was (and is) widespread use of charts of accounts which reflected the balance sheet and income statement categories underlying the well-known basic equation. In the area of theory, it was frequently pointed out that this was the fundamental process; Mattessich made in the point of departure in his quest for a measurement theory of accounting : "The most basic measurement is classification, a fundamental discriminatory process whereby the various categories can be identified and distinguished through numerals". The division into classes can be a scale of measurement, and he gives as his example, a chart of accounts. The same proposition is found in such widely different sources as a book on controllership, which identifies the five basic classifications as assets, liabilities, proprietorship, revenues; and expenses, and a contribution to the normative theory of accounting, where the last three were given the names, residual equity, income, and cost.

The area of managerial accounting, however, did not disclose any comparable uniformity of ideas, and the study of different classifications of costs not only threw up the possibility of alternative sub-classes but also revealed a weakness in the basic classification used by financial accountants. This was the observation that a chart of accounts should not be based upon the balance sheet, because many accounts required by a business are eliminated in the preparation of the financial statements, in particular the so-called "clearing accounts".

By 1969, when Sorter drew attention to the problem, the idea that accounting events were not given in nature had been recognized widely, and attention was being devoted to "economic events" as the phenomena which accountants were attempting to interpret and represent. Unfortunately, this concept led to the identical classification scheme as did accounting events. Sorter postulated that accounts were needed to provide information to be used in decision models, that individual users would develop their own input values, and therefore a financial statement should include all items relevant to any decision model. The starting implications of this observation led Johnson to attempt to design a structure for a financial accounting system of this type.

Accounting Theory in U.S.A. : Until the twentieth century the contribution of the English-speaking world to the development of accounting theory was entirely pragmatic. Even today one can open a book entitled *Principles of Accounting* and find its author concerned entirely with method. The most virulent controversy before the 1930s was the dispute which centered on the notorious Jones of Bristol, and that one dealt with technical aspects of double-entry book-keeping and the need for the journal.

The twentieth century has seen a radical reversal of roles. During this period the English-speaking world (the United States, the United Kingdom, Australia, Canada, and New Zealand in particular) has become a powerhouse of ideas about accounting : what it is and what it should be. In this chapter and the next we shall trace the course of this transformation, with the spotlight mainly on accounting in the United States.

THE INDUSTRIAL REVOLUTION

A major factor was the industrial revolution and the related technological changes of the nineteenth century. The lengthening of the time period of production which characterized these changes produced a need to account for use separately from acquisition and thus directed attention to the cost allocation problem.

The processes of mass production may be contrasted with those of an artisanal economy. In the latter, manufacture was accompanied by payments at every stage – for materials when the work was put in hand and for labor as the work was executed, either in the workshop or in the worker's home. The difference between the money payments and the eventual money receipt when the work was completed was called profit and had to cover the craftsman's expenses, which were virtually all domestic in nature. The concept of profit is still used by economists, even though it is a pre-industrial one. It underlies the analysis of investment situations in terms of cash flows.

In factory production, however, the nexus between acquisition and use and between production and market was broken. The manufacturer produced for an unknown customer, in advance of demand, and therefore, could not associate the eventual selling price with production. He acquired raw materials, machinery, and often labor in advance of production and therefore could not identify the cost of production without making assumptions about *cost flows*. The conceptual nature of allocation has been demonstrated by Thomas, who points out the artificially – he calls it arbitrariness – of all accounting allocations.

We must also be aware of a semantic problem which exists in the United States because of the use of the word "allocation" to refer to three distinct accounting processes. The first of these is *assignment*, the identification of payments with objects. The second is *allocation*, tracing the use of objects in a production process. The third is *absorption*, tracing the use of a production process in the production of a product or service. In this section we are contrasting the simplicity of assignment with the complexity of allocation and absorption.

The immediate problems raised by the necessity to allocate and absorb costs concerned the calculation of depreciation and depreciation accounting, the valuation of inventories of work in process and finished goods and accounting for cost of goods sold, and accruals and deferrals generally, in relation to uses which preceded or followed acquisitions. In course of time the same necessity has led to a vast area of accounting problems, covering virtually the entire field of accounting, and created what one writer has referred to as "explanation strains".

These strains were rendered more acute by the traditional separation of financial and cost accounting. Because of the critical importance of these allocation decisions for pricing policy, they were often retained by the proprietor of the business long after he had delegated accounting for acquisitions to a clerk.

Cost accounting went through three stages in the nineteenth century. In the first, it was performed by nonaccounting calculations illustrated by the papers of Josiah Wedgwood and Charles Babage. In the second, the need to create order out of chaos led to the introduction of accounting method and the growth of systems of cost accounts separate from the financial accounts. These separate accounts might be reconciled with the financial accounts, or made to interlock with them through the medium of control accounts: a cost ledger control account in the financial books and a general ledger control account in the cost books. Finally, the integration of financial and cost accounts in one accounting system was achieved. It is perhaps significant that the development of modern accounting theory dates from the beginning of this integration. We should not underestimate the important contribution made by industrial engineers in clarifying and sometimes finding solutions for the accounting problems of the industrial revolution.

THE GROWTH OF THE CORPORATION

Corporations are nothing new; the Romans used them, together with elevators, central heating, and divorce. An extensive world trade was conducted from the fifteenth century on by the chartered corporations formed by rulers and entrepreneurs in the mercantilist period. During the nineteenth century, however, and particularly in the United Kingdom and the United States, the number of commercial corporations grew at an accelerating pace, from several hundreds to tens of thousands. Laws were passed to facilitate their formation and administration and to render them accountable to the governments which gave them life.

The characteristic features of the corporation are its relatively long life (perpetual succession) and the transferability of its capital. Both of these are the consequence of it being an artificial person, but a legal person nonetheless. Because the corporation does not die, or become sick or insane, it is a convenient device for executing contracts, including contracts to supply capital for industrial undertakings. Because of the transferability of its capital, it is also an attractive device to businessmen and other investors concerned about their future liquidity needs. Add to these the bonus feature of limited liability, and the corporation becomes the irresistible instrument of business growth.

Use of the corporation as a device for channelling savings into business investment effected a separation between capital and its management, formal in the case of the "one man corporation," but very real in the case of those corporations which raised capital from a number of investors. In order to provide these "anonymous partners", as the French law called them, with some means of ascertaining what was happening to their investment, a succession of Companies Acts was legislated in the United Kingdom which required corporations to keep records and to render account to their stockholders. Most of the English-speaking world has enacted comparable legislation; only in the United States has it proved impossible to make the states, in whom the power resides, exercise social control over corporate officials. The situation is now changing slightly, as the states see the corporations as taxpayers and legislate for accounts to be kept for the purpose of demonstrating taxable capacity.

Typically, a Companies Act would contain sections requiring accounts to be kept and financial reports to be rendered to stockholders. More important, to protect stockholders from the deception of being paid dividends to keep them quiet while the managers were losing the company's money, the law would stipulate that dividends may be paid only out of profits. This led of necessity to the preparation of period accounts, or annual financial statements, and to problems of allocation similar to those which were raised by the factory system.

As the manufacturer required information about depreciation, work in process and finished goods, and cost of sales in relation to specific products or services, so the corporation required this type of information in relation to specific periods. The major problems in financial reporting arise from segmenting the life of the firm into artificial lengths only remotely related to the time period of production. As a consequence, we find accountants adopting the *going concern* assumption, that raw materials acquired will be put into production, that work in process will be completed in the form of saleable finished goods, and that finished goods will be sold at prices higher than their production costs. The going concern assumption also involves a belief that the business will continue to operate in more or less the same way until it has recovered its

investments in fixed assets from its customers as part of the selling prices of its products.

The going concern assumption, required for asset valuation, also affected profit (income) measurement, since reduction of asset values must be regarded as a loss. Other assumptions adopted for income statement preparation included the *cost* assumption, that allocation methods used for cost accounting are useful for financial reporting, and the *stable monetary unit* assumption, that changes in purchasing power can be disregarded.

Another important contribution of the corporation laws was the specification of the capital of the corporation in legal terms. The Companies Acts provided for the registration of corporations to include a description of their capital stock and for the reduction of this capital stock only by legal proceedings, under the mistaken belief that persons dealing with the corporation would be protected in some way by the maintenance of this legal fiction. A variety of ancillary problems were gradually incorporated in the statutes: how to account for amounts subscribed in excess of par, what could be charged to capital surplus, how surplus could be converted into legal capital. This set of problems combined with the problems involved in preparing period income statements to emphasize the separation of income from capital, which is a major characteristic of financial accounting. The concept of *capital maintenance*, of keeping the legal capital of the corporation unimpaired, came in conflict with the concept of keeping its assets in a productive state or maintaining economic capital.

In spite of these legal provisions for the protecting of stockholders and creditors, unscrupulous managers nevertheless found ways to make capital look like profits, to pay dividends to one set of shareholders out of capital paid in by another set, and to defraud creditors extent, they always will. One of the objectives of accounting theory is to develop rules of conduct which will make this behavior more difficult. This explains the normative nature of many propositions in accounting; they are attempts to dissuade people from behaving dishonestly.

One fascinating byway of the growth of corporations in the United States is the antitrust law. By the end of the nineteenth century a number of corporations had grown, by retention of profits or by acquisitions, to a size which represented a visible concentration of wealth and a real source of social and economic power. The name for a corporation which grows by acquiring control over other corporations is a *holding company*. In 1890 the U.S.A Congress passed the Sherman Antitrust Act, to prevent corporations which did not possess powers to own stock in other corporations from acquiring control over such stock by means of a trust instrument. This forced corporations to obtain powers to own stock in other corporations directly, and a number of state corporation laws were amended to permit this. In 1914 the Clayton Act was passed, which made illegal the acquisition of stock of another corporation if this tended to reduce competition. In spite of these and other measures, mergers and acquisitions thrived and the vertical and horizontal integration of industries has been succeeded by the conglomerate, a holding company owning controlling interests in corporations operating in different industries.

The consequence of the combination of corporations was a demand for financial reports which would reveal the combined assets of the group and the combined results of all the corporations of which it consisted. This led to the development of consolidated financial statements as early as 1886, although the first annual report of the United States Steel Corporation in 1902 is usually acknowledged as the prototype of consolidations.

THE RAILROADS AND GOVERNMENT REGULATION

The importance of the railroads in the process of identifying accounting problems cannot be exaggerated. They were the first really large-scale enterprises spawned by the industrial revolution. The first capital-intensive enterprises, they presented in unmistakable terms the separation of capital and management, and they provided the first scenario for government regulation of business, including its financial statements. This resulted in large part from the misdeeds of a host of promoters who sold railroad stock and acquired control over railroad assets with no intention other than to enrich themselves.

The New York Stock Exchange dates from before the American revolution, but only in 1866 did it prescribe that listed corporations should file their financial statements. Not until 1900 did this influence become effective. One of the principal reasons for the involvement of the New York Stock Exchange was the tremendous fluctuation in the prices of railroad stocks, a consequence of the ignorance of investors as well as the manipulations of the railroad barons.

The railroads were the center of a historical struggle which resulted in the recognition that use should be accounted for, and not merely acquisition. The railroad managers argued that regular maintenance and

replacement of worn equipment would cause the permanent way and the rolling stock to last indefinitely. Depreciation was therefore not a relevant concept, and replacements should be charged to expense as incurred. This solution has obvious attractiveness, since it made the expense a discretionary item— in good years more and in lean years less or possibly none.

In 1876 the Railway Commissioners of Massachusetts required railroads to keep accounts, and by 1879 a uniform system of accounting had been adopted nationally on the initiative of the Interstate Commerce Commission (ICC). The Hepburn Act of 1906 authorized the ICC to prescribe railroad accounting, which it did in part by publishing "Classification of Operating Expenses" in 1907 and finally a complete "Accounting Classification for Steam Railroads" in 1914.

The 1907 scheme provided for depreciation to be charged to operating expenses on a monthly basis, but gave individual railroads the option not to do so (or to include accrued expenses) if, for example, they were losing money. In 1923 the ICC proposed to make depreciation accounting mandatory; the railroads opposed, using arguments which are still heard today when additional disclosure is sought — that it was unnecessary, deceptive, and impossible to calculate with accuracy. The railroads' opposition delayed the imposition of mandatory depreciation until 1932, when it was immediately suspended because of the depression. It finally came into force in 1943. The omission of depreciation was undoubtedly one of the factors which permitted railroads to operate and attract capital long after obsolescence and inefficiency had made them a burden on the economy.

The outcome of the struggle just described was irrelevant, because of the development of generally accepted accounting principles in the United States, which required railroads to charge depreciation in their published financial statements. The struggle itself is important because it documents the transition from a pre-industrial to an industrial accounting system. Government regulation in the United States has had some of the effects of the Companies Acts in the United Kingdom and elsewhere, in that a number of commissions besides the ICC (the Federal Power Commission, the Federal Communications Commission, the Federal Aviation Authority, etc.), have prescribed accounting systems for the enterprises they regulate. Although some accounting problems have been identified and solutions found through this process, the consensus is that government regulation has had an unfavorable effect on the accounting of regulated enterprises, through discouraging experimentation and innovation. Further, the accounting systems have ceased to be oriented toward disclosure, as in the unregulated sector, and have increasingly become instruments of politics. This is because the commissions have become rate makers, thus taking the pricing function out of the market. One of the principal means for a government to effect a political purpose is by fixing prices.

Thus, although a number of accounting issues have been raised by the regulation of public utilities, they can be readily explained in the context of the political problems of rate setting and do not form part of the set of issues which accounting theory seeks to explain.

THE CORPORATE INCOME TAX

Perhaps the single most pervasive influence on the growth of accounting has been the corporate income tax, since it affects all business firms, large or small, incorporated or unincorporated, regulated or unregulated. Here we are concerned with the influence of the corporate income tax on the development of modern accounting theory.

The critical point is that the corporate income tax is a legal structure, and therefore the solutions to tax problems are legal solutions. To the extent that the tax laws recognize accounting solutions, accounting becomes part of the law. There is, for example, no definition of income to be found in the tax code, and the logical tendency of the taxing authority is to tax movements of cash. The first attempts at a corporate income tax in the United States, the 1909 Excise Act and the 1913 Revenue Act, measured net income as cash receipts less cash disbursements, and a battle had to be fought to establish the acceptability of accrual accounting as the basis for income taxation.

A striking illustration of the difference between accounting and taxation is found in the United Kingdom where the objective is also to tax receipts, and the business accounts are accepted as a point of departure. The tax laws were laid down before the need to charge depreciation was clearly identified, and to this day, depreciation is not deductible in the U.K. However, businessmen were eventually successful in persuading

the tax authority that fixed assets may be losing value through time, and the tax laws were amended to introduce capital allowances. These are a quite separate legal system for calculating depreciation for tax purpose, having no connection with accounting depreciation and applicable only to specified classes of depreciable fixed assets; store fixtures and office buildings are excluded. In preparing a business tax return therefore, the U.K. accountant adds back depreciation to net income and deducts a different amount, calculated according to the law.

This illustration serves to remind us that although business net income is a point of departure for arriving at taxable income, the two are essentially distinct concepts. It appears that the original intention of Congress in the United States was to establish a concept of taxable income which corresponded with business net income, but the harmonization of the two has become impossible. In the first place, tax avoidance through technical accounting methods created loopholes which led to legislation forbidding certain tax accounting practices; the valuation of inventories at prime cost, for example, is not permissible, however logical this might be in a specific context. In the second place, use of the income tax laws to effect a redistribution of wealth and to promote political objectives has led to the enactment of a multitude of provisions concerning what is or is not to be included in taxable income, and what may or may not be deducted therefrom.

We should not look, therefore, to the corporate income tax as a source of modern accounting theory. Its importance lies in :

- (1) Extending the need for accounting to many businesses which would not otherwise have prepared financial statements.
- (2) Influencing many businesses to adopt tax rules or guidelines for the recognition of items of revenue or expense, because of the complications involved to conventional practices.
- (3) Stimulating debate on such questions as depreciation and inventory accounting, accrual and deferral, and asset and liability valuation, by revealing alternatives to conventional practices.
- (4) Introducing a new subset of accounting problems, accounting for taxation, which have strained the ability of accountants to explain the application to them of accounting principles developed in a different context.
- (5) Distorting accounting to conform with taxation where the tax laws provide that a particular deferral or deduction may be claimed statement treatment. This is the situation in the United States with regard to the use of the LIFO method of determining cost of goods sold. In some countries (France Germany) many of the items in the financial statements are there because of the requirements of the tax laws.
- (6) Providing a false trail for accounting theorists, such as the rule in *Eisner v. Macomber*, who have been tempted to adopt legal explanations for practices found outside the legal framework.

THE ECONOMISTS

Until the early nineteenth century most economists were political economists; their preoccupation with the production and distribution of wealth centered on the source of political power. By the end of the nineteenth century, however, economists had begun to appreciate the role which industry played in the production and distribution of wealth. Such noted economists as Alfred Marshall in England, Bohm-Bawerk in Austria, and J.B. Clark in the United States conducted studies of business enterprises and attempted explanations of concepts such as income, capital, and cost which are the subject of accounting theory also. Sombart pointed out that the ideas of economists on these matters originated in accounting, but the victory of the marginalist school resulted in new definitions which gradually moved economics and accounting further apart.

Nevertheless, the apparent similarity of the subject-matter of economic studies led some early accounting theorists to assume that the disciplines of accounting and economics were essentially one, so that accounting problems could be solved within the framework of economic theory. This assumption pervades much of the contemporary literature on accounting theory, and its origins can be traced to books written in the early years of the twentieth century.

The interests of economists lie primarily in macro-economics, the study of the national income and its generation,

and their work in micro-economics, the study of economic behavior at the level of the firm, is designed to support the major field of interest. For this reason, economists have never made the transition from the pre-industrial model of the firm, where acquisitions and uses, and capital and assets, cannot be distinguished, where financial institutions as sources of money can be disregarded, and where time can be reduced to an average or omitted entirely as a significant variable. As we have noted, this transition was accomplished by accountants in the nineteenth century and resulted in the valuation method we call allocation.

One notable exception to the failure of economists to adapt to the industrial (and indeed, the post-industrial) realities was J.M. Clark. Clark recognized the existence of situations in which economic valuation could not be effected by imputing marginal amounts to production inputs or outputs; he dealt specifically with the nonimputable overhead costs of manufacturing firms. Another American economist who attempted to adapt micro-economics to the industrial scene was Thorstein Veblen. Unfortunately the pioneering work of these theorists proved abortive, as their colleagues were unwilling or unable to abandon the Ricardian images on which their science was based.

THE AMERICAN SCHOOL OF ACCOUNTING THEORY

Much the same sequence of events can be identified in other countries. The situation in the United Kingdom, where the industrial revolution and the corporate income tax originated, can be contrasted with that in the United States, where government regulation played a unique role. The Anglo-American jurisdictions can be contrasted with those jurisdictions which forced financial accounting to conform to tax accounting. Nevertheless, it is noteworthy that the response of accountants in different parts of the world to similar situations was highly comparable. By the beginning of the twentieth century the form and content of financial statements did not differ to any considerable extent throughout the Western world.

From 1930 on, however, special factors have caused the U.S. to act as a trail-blazer in the development of accounting theory. There is a distinct "American School of Accounting Theory." The characteristics of this school are 1) the involvement of a relatively large number of academics and practitioners in defining, researching, and debating accounting issues; 2) the existence of institutions which publicize and focus attention on the views of accounting theorists, e.g. the AICPA and the AAA; 3) the general acceptance of the neo-classical economic theory of investment, as adapted by scholars in corporation finance; and 4) an experiment approach to accounting aimed at producing a framework which will justify and explain a more significant social role for the accountant than he has appeared to play in the past.

Because of the absence of a legal framework to which accounting questions could be referred, early American textbook writers displayed a tendency to look for reasons behind their expositions of accounting practices. The prevalence of the proprietary theory approach impelled Beker to attribute its origins to these writers, although we now know this theory to have originated in Europe.

The first author to identify himself clearly as an accounting theorist was Paton, whose seminal work was originally published as a doctoral dissertation in 1916. It was Paton who emphasized the entity theory, which earlier American writers had used and Littleton has identified in nineteenth century European publications. Paton pointed out in the preface to his book that "The conception of the business enterprise as in all cases a distinct entity or personality—an extension of the fiction of the corporate entity—is adopted, although not without important qualifications ..."

A.C. Littleton was another accounting scholar of this period whose works took an explicitly theoretical form and whose ideas contributed significantly to modern accounting thought. Both Paton and Littleton made a number of important contributions to the literature between 1925 and the latter's death in 1974; Dr. Paton is still at work in this field. The two combined forces to produce an influential monograph widely regarded as an accounting classic.

The principal features of Littleton's contribution to accounting theory have been summarized as

- (1) The inductive approach to the development of accounting knowledge.
- (2) The historical method of relating accounting practice to its social and economic development.
- (3) The development of the idea of general purpose financial statements which permitted the initial development of an organized structure of accounting thought.

- (4) The view of accounting theory construction as explanations of varying levels of validity of relations among concepts.
- (5) The comprehensive view of accounting as one common interrelated body of knowledge to be studied and examined as a single discipline.

Littleton is now viewed as a figure of the past; current accounting scholarship adopts contrary assumptions on virtually every point. Nevertheless, his definitions and interpretations have not yet been demonstrated false in practice, and for that reason are still part of accounting theory.

During this period a number of other accounting writers occupied themselves with theoretical questions. Some, such as G. O. May, Maurice E. Peloubet, Wilmer L. Green, Thomas Henry Sanders, and Perry Mason, concentrated on explaining current financial accounting practices and their origins. S. Paul Garner performed a similar service for cost accounting. D R Scott attempted to reconcile accounting with statistical method ; Johan B. Canning with the economic theories of Irving Fisher. Henry W. Sweeney investigated the problems of accounting in a time of changing price-levels. Robert H. Montgomery attempted to develop a theory of auditing, Stephen Gilman to produce agreed definitions of accounting terms and a common concept of income.

Since 1950 the number and quality of contributions to accounting theory have increased rapidly as the subject of accounting has been firmly placed in the mainstream of academic life in American universities. In part this has been a function of an increase in the number of Ph.D.s in accounting, since the Ph.D. is generally regarded as a research degree and carries the moral obligation to continue to explore and publish after the completion of the doctoral dissertation. But many practitioners and accounting teachers who did not acquire this degree have also contributed richly to the expanding body of accountancy knowledge. It is impossible to provide a complete list in a book of this kind, but reference will be made to the work of many individuals at appropriate places. In any case, it is clear that the world has never seen a comparable concentration of talents on the problems of accounting as that in the United States during the past seventy years.

Much of this work was made possible by institutional arrangements which were ahead of the rest of the world by many decades. Public accountants established foundations which awarded funds for research and publication : Sanders, Hatfield, and Moore, for example, were commissioned by the Haskins and Sells Foundation. The American Institute of Accountants, and its successor body, the American Institute of Certified Public Accountants, sponsored research often ignored by their committees responsible for promulgating accounting principles, and provided a forum for ideas in an official publication. The *Journal of Accountancy*. The American Accounting Association's quarterly publication *The Accounting Review*, founded in 1925, quickly became the leading vehicle for exposing new ideas and discussing theoretical problems. The AAA created a committee structure for scholars with similar research interests, who were encouraged to work together and publish jointly-authored papers. The AAA also established its monograph series, permitting outstanding scholars to publish work of high quality which would be unlikely to attract the support of a commercial publishing house. Similar support to that provided by the AICPA and the AAA was available to scholars interested in cost and management accounting from the National Association of Cost Accountants (now the National Association of Accountants) and through its journal the *NACA Bulletin*, (now called *Management Accounting*). In recent years these institutional arrangements have increased, and many other sources of support are now offered to accounting theorists in the United States.

THE ACCEPTANCE OF NEO-CLASSICAL ECONOMIC THEORY

At the beginning of the period under discussion the primary influence on accounting theory was legal in nature. The modern profession of accountancy owes its origins to the law and has never forgotten the fact-to the bankruptcy and company laws of nineteenth century England and to the taxation and regulatory laws of twentieth century United States. The search for accounting principles was invariably referred to a framework analogous to that of the law; writers contrasted the conventional principles of law and accounting with the immutable principles of the sciences.

Beginning with Canning in 1929, however, we find an increasingly explicit effort to establish accounting

as a science in the mold of economics. Canning was a disciple of Irving Fisher, whose important work on income and capital theory will be discussed in later on, and attempted to translate Fisher's ideas into a form useful to accountants. Fisher and Canning taught at Californian universities, and we can identify a "California School" of accounting theorists formed by their views. Maurice Moonitz is the current leader of the California School.

Paton was also exposed to the models of economic theory and taught economics as a young man at the University of Michigan, but he attempted to distinguish accounting from economics rather than to integrate accounting into a framework of economics theory. The second generation of accounting theorists appears to have been more ready to espouse this integration, and from about 1936 until the present day the acceptance of economic theory in its neo-classical form, the form in which it is usually taught in American universities, has become more general. This is not to denigrate Fisherian and Keynesian economics, which have been skillfully interwoven into the neo-classical fabric during the past forty years.

The acceptance of economic theory has had several effects on the development of accounting theory. In the first place, the rigor which characterizes the formulation of economic propositions and the construction of economic models and their use to derive theorems and to deduce principles and rules has been widely accepted as a desirable standard for parallel work in accounting theory. The almost theological tone of previous generational of accounting writers has been replaced by the voice of reason. Secondly, many definitions and concepts used by economists have been taken over by accountants (as earlier economists adopted accounting terms and ideas), which has opened up fruitful lines of inquiry and permitted the formulation of new research problems. Examples of this are accountants uses of such economic concepts as marginal cost, sunk cost, present value and uncertainty. Indeed, accounting has at times appeared to be a branch of economics, or vice versa.

Thirdly, and in particular, the development of a theory of corporate finance based on the investment theory of economics has presented accounting theorists with a challenge and an opportunity. It is clear that finance and accounting are inextricably interwoven, and we have pointed out the similarity between the basic equations of the two disciplines. To produce a theory of accounting compatible with the theory of finance would appear to be a useful goal. We shall demonstrate later how this objective underlies *APB Statement No. 4*, the most comprehensive statement of accounting theory to come from the accountancy profession.

METHODOLOGY OF ACCOUNTING THEORY FORMULATION

The view that accounting theory should consist of principles "relatively few in number" was accepted by the AIA's Joint Committee with the New York Stock Exchange. We may infer that economics provided the inspiration, where the law of demand is deduced from the postulate of utility maximization and the law of supply from the postulates of the production function and profit maximization.

This view contrasts sharply with the inductive approach favored by Littleton. Littleton saw the derivation of accounting principles from the observation of good accounting practices; good business practices were accompanied by good accounting practices. Although the formal structure of postulates, principles, and rules did not appear explicitly in this process, the Littleton-Chambers debate suggests that a set of normative postulates underlie Littleton's reasoning; to him, accounting was what accountants *should* do.

Paton, on the other hand, summarized the postulates on which his theory was based.

- (1) The separate existence of the business entity from its owners or managers
- (2) The going concern assumption of continuity as the normal case
- (3) The balance sheet equation, Assets=Equities
- (4) The exhaustive nature of financial condition, in which every significant fact is expressed in dollars
- (5) The stability of the measuring unit (dollars)
- (6) The equivalence of cost and value on original entry
- (7) The transitivity of cost, which "passes over and attaches"
- (8) The accrual of costs, their expiry over time and attachability to production

A more formal approach is the taken by Mattessich, who starts with a definition :

Accounting is [a discipline concerned with] the quantitative description and projection of [the] income [circulation] and [of] wealth [aggregates] by [means of] a method based on the following set of assumptions...

There are eighteen assumptions, specifically :

- (1) Monetary valuation
- (2) Time
- (3) Structure (accounting as a closed system)
- (4) Duality (double-entry)
- (5) Aggregation (algebraic operation)
- (6) Economic objects (scarce resources)
- (7) Inequity of monetary claims (stability of the measuring unit)
- (8) Economic agents (human actors)
- (9) Entities (social institutions)
- (10) Economic transactions (movements of values)
- (11) Valuation (operational rules for measuring movements of values)
- (12) Realization (operational rules for measuring income)
- (13) Classification (operational rules for analyzing movements of values)
- (14) Data input (operating rules for bookkeeping)
- (15) Duration (operating rules for relating entities to time)
- (16) Extension (operating rules for consolidating entity accounts)
- (17) Materiality (operating rules for identifying data)
- (18) Allocation (operating rules for imputing values to parts of entities)

In spite of the elements of overlap, this most precise statement of assumptions which has been presented as such by an accounting theorist and from which explanations of accounting practices have been derived. Nevertheless, it could be viewed as incomplete, because it does not contain any reference to user needs (behavioral assumptions concerning the actor) and because it omits other postulates which appear to have general acceptance, particularly relevance, consistency, continuity, and objectivity.

Another approach to methodology is that taken by Sterling. Sterling adopts expressly and by reference economic theories of income, price theory, information and communication theory, and measurement theory. Because of the contradictions inherent in any theoretical framework it would have been preferable for Sterling to specify more closely which definitions, assumptions, and models were used in the construction of his theory, particularly because Sterling's theory is normative in nature.

A P B Statement No. 4, "Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises" lies somewhere between these two extremes, including as it does both specific postulates and the adoption of general frames of reference as integral parts of the exposition.

APB STATEMENT NO. 4

Whereas the need for a formal structure of accounting theory has been apparent to academics since the 1920s, it was not until 1958 that the American accountancy profession was ready to accept such an objective. The then president of the AICPA called for the Institute to provide an adequate research organization continuously to reexamine basic accounting assumptions and to develop authoritative statements. In the event, the APB did not live up to these expectations, and the first attempts to state postulates and principles were rejected by the APB. In spite of the return to a piecemeal approach to pronouncing on accounting principles, the search for broad fundamentals went on and resulted in the publication in 1970 of *A P B Statement No. 4*. The aims of the *Statement* were both educational and developmental ; the latter intended to provide a basis for guiding the future development of financial accounting. But the two aims were essentially distinct. The *developmental* part contained general propositions about the environment, objectives, and basic features of financial accounting. The educational part contained a description of the then generally accepted accounting

practices. The contradiction between these two approaches was nowhere acknowledged, it was avoided by eliminating deduction and relying entirely on induction.

The part on generally accepted accounting principles divided them into three classes:

- (1) Pervasive principles which underlie other principles (but are restricted by modifying conventions)
- (2) Broad operating principles, of recording, measuring, and communicating
- (3) Detailed principles of practical application

Classes 2 and 3 will be discussed in subsequent chapters on measurement and disclosure and when the individual financial statements are examined in detail. Here we shall analyze the developmental part of the statement and the pervasive principles, to demonstrate the relevance of economic theory to the former and its irrelevance to the latter.

We have examined the new definition of accounting put forward by the *Statement*. While it does not help identify the kind of problems with which accounting is concerned, it nevertheless puts accountants firmly in their places, as the servants of those who make economic decisions. The many planning roles of the professional accountant in modern society are not recognized by this definition. Financial accounting is viewed as the production of "a continual history quantified in money terms."

The *Statement* treats financial accounting as a continuous history of economic resources and obligations and of economic activities that change those resources and obligations. While the word "economic" is frequently used in a layman's sense as a synonym for business, subsequent evidence indicates that this is not the case here, and that "economic" is a reference to the subject-matter of economic theory. That these two concepts are different will be explained more fully later on; suffice at this point to mention that economic theory abstracts from the institutional framework; there are no businesses in economic theory, only entrepreneurs.

The following environmental postulates are then introduced :

- (1) Financial accounting information is used by a variety of users for diverse purposes. (The *Statement* expressly refrains from distinguishing information from data).
- (2) There is a presumption that a significant number of users need similar information.
- (3) All societies engage in production, income distribution, exchange, consumption, saving, and investment.
- (4) In the United States most productive activity is by investor-owned business enterprises of a complex kind. This complexity is a function of :
 - (a) Continuity of economic activity (underlying the need for allocation)
 - (b) Jointness of products (underlying the need for arbitrary assumptions)
- (5) Modern economies function within a stabilizing framework of law, custom, and tradition affecting corporate existence and contractual rights and obligations.

The *Statement* provides the following definitions :

- (1) *Economic resources* - Scarce means, consisting of productive resources (owned and leased), products, money, claims to money, and ownership interests in other enterprises.
- (2) *Economic obligations* - Present responsibilities to transfer economic resources to other entities in the future
- (3) *Residual interests* - Economic resources minus economic obligations.
- (4) *Economic events* - Acquisition and disposal of resources, incurrence and discharge of obligations, and changes in the utility or prices of resources held. These are classified into external and internal events; the former include exchanges and nonreciprocal transfers, and the latter, production and casualties. Although the classification is intended to be complete and to avoid overlapping, it will be observed that there is no place for waste (economic theory likewise abstracts from waste), and casualty losses could as readily be classified as external events.
- (5) *Cost* - Economic cost is the sacrifice incurred in economic activities.

What these assumptions and definitions appear to do is to transform certain propositions used by economists into a form in which they can be related to other propositions used by accountants. It is also interesting to observe the survival of the proprietary theory in the form of the equation : residual interest equals economic resources minus economic obligations, and in the proposition that "Net income or loss can result from each of the types of events

listed except transfers between an enterprise and its owners." Net income is not otherwise defined.

The Statement lists the basic features and basic elements of financial accounting, which are shown on table 3.4. The similarity of the features to Paton's and Mattessich's assumptions is apparent, as also the absence of a method whereby they can be combined with objectives to produce financial statements.

TABLE 3.4 APB STATEMENT NO. 4

Basic Features of Financial Accounting	Basic Elements of Financial Accounting
(1) The accounting entity	Assets
(2) The going concern	Liabilities
(3) Measurement of economic resources and obligations	Owners' equity
(4) Time periods	Other Balance Sheet elements (commitments, contingencies and other financial matters)
(5) Money measurement	Revenue
(6) Accrual	Expenses
(7) Exchange price as the "basis" for financial accounting measurements	Net income (net loss)
(8) Approximation (allocation)	
(9) Judgment required	
(10) General-purpose financial information	
(11) Fundamentally related financial statements (double entry system)	
(12) Substance over form	
(13) Materiality + Objectives = Economic elements recognized and measured in the form of the Basic Elements	

PERVASIVE PRINCIPLES AND MODIFYING CONVENTIONS

Since generally accepted accounting principles are found by inquiry and not deduced from postulates, we would not expect them to lie snugly within the framework established in the developmental part of the *Statement*. However, they are said themselves to form a hierarchy, pervasive principles being "few in number and fundamental in nature." The *Statement* emphasized that "No attempt is made . . . to indicate specific relationships between principles nor indeed between postulates, objectives, basic features and elements, as these terms are used in the *Statement*. The pervasive principles "establish the basis for implementing accrual accounting" and determine 1) the types of events to be recognized, 2) the bases on which to measure the events, 3) the time periods with which to identify the events, and 4) the common denomination of measurement. The pervasive principles are six in number :

- P-1. Initial recording of assets and liabilities "generally . . . on the basis of *events* in which the enterprise acquires resources . . . or incurs obligations. . . the assets and liabilities are measured by the *exchange* prices at which the *transfers* take place." (emphasis supplied) The events do not include own construction of assets!
- P-2 Revenue recognition requires 1) that the earning process be complete and 2) that an exchange has taken place. [Note : this is a new realization assumption and does not correspond with current generally accepted accounting principles.]
- P-3 *Some* costs are recognized as expenses on the basis of a presumed direct association with specific revenue. (The *matching* principles)

- P-4 In the absence of a direct cause and effect measurement *some* costs are allocated to periods using a systematic and rational relationship to benefits.
- P-5 *Some* costs are expenses because no future benefits are likely, or allocation between periods seems pointless.
- P-6 The U.S. dollar is the unit of measure in the United States. Changes in its general purchasing power are not recorded in the basic financial statements. [This is an example of a principle which is clearly incompatible with the economic theories referred to in the developmental section, and the *Statement* refers to the use of LIFO and accelerated depreciation in the USA as attempts to minimize the effects of not recording changes in purchasing power.]

The modifying conventions have evolved to mitigate the unwanted effects of rigidly applying these pervasive measurement principles. They are : *conservatism* (understatement of net assets and net income preferred to overstatement); *emphasis on income* (the income statement take precedence over the balance sheet); judgment of the accounting profession may modify the principles, by approving measurements which are in direct conflict with the fundamental, pervasive, accounting principles of measurement.

LOOKING TO THE FUTURE

The *Statement* concluded by pointing to ways in which generally accepted accounting principles might change, even the pervasive and broad operating principles, in response to changes in economic and social conditions, technology and user demands. Orderly change depended upon the consistency of proposed principles with the general tenor of the *Statement*.

Suggestions for change included 1) eliminating differences in accounting practices not justified by differences in circumstances, 2) making accounting principles more consistent internally, 3) improving their effectiveness, and 4) reflecting more adequately the economic activities represented. Specific proposals related to including commitments, contracts, and leases in financial statements as assets and liabilities; developing unique methods for charging costs including depreciation, against revenue recording revenue under the accretion method; substituting output values for input values; recognizing price-level changes; and including budgets as part of the basic financial statements. Other proposals concerned new financial statements; use of ratios in place of money amounts; more effective visual communication by graphs and charts. The *Statement* also pointed toward the development of international accounting standards, the world equivalent of generally accepted accounting principles.

Chapter-4

Accounting Postulates, Concepts and Principles

Knowledge of accounting requires enquiry not only into accounting methods and principles but also the structure or framework of accounting theory from which the accounting methods and principles are derived. Many accounting theorists and writers have contributed in the development of structure of accounting theory, using either a deductive approach or an inductive approach. Littleton has suggested a framework of accounting theory whereby rules of action can be converted into accounting principles. The basic objective in developing structure of accounting theory has been to codify the accounting postulates and principles and to formulate a coherent accounting theory to improve the quality of financial reporting.

POSTULATES, CONCEPTS, PRINCIPLES

Terms such as postulates, concepts, principles are widely used, but with no general agreement as to their precise meaning. In order to avoid confusion, an attempt has been made to define these terms.

Accounting postulates are self-evident statements which are generally accepted because of their conformity to the objective of financial statements. Accounting principles are general decision rules, derived from both the objectives and the theoretical concepts of accounting, which govern the development of accounting techniques. Accounting techniques are specific rules derived from the accounting principles to account for specific transactions and events faced by the accounting entity.

American Institute of Certified Public Accountants (U.S.A.) observes: "Postulates are few in numbers and are the basic assumptions on which principles rest. They necessarily are derived from the economic and political environment and from the modes of thought and customs of all segments of the business community. The profession, however, should make clear their understanding and interpretation of that they are, to provide a meaningful foundation for the formulation of principles and the development of rules for the application of principles in specific situations.

According to Hendriksen, "Postulates are basic assumptions or fundamental propositions concerning the economic, political, and sociological environment in which accounting must operate. The basic criteria are that (i) they must be relevant to the development of accounting logic, that is, they must serve as a foundation for the logical derivation of further propositions, and (2) they must be accepted as valid by the participants in the discussion as either being true or providing a useful starting point as an assumption in the development of accounting logic. It is not necessary that the postulates be true or even realistic. For example, the assumption in economics of a perfectly competitive society has never been true, but has provided useful insights into the working of the economic system. On the other hand, an assumption of a monopolistic society leads to different conclusions that may also be useful in an evaluation of the economy. The assumptions that provide the greatest degree of prediction may be more useful than those that are most realistic."

A principle is an explanation concisely framed in words to compress an important relationship among accounting ideas into a few words. A principle may sometimes seem rather over-compressed. This will be because it is concisely framed and its phrases usually need collateral definition. But this fact does not detract from the usefulness of formulated principles; it merely indicates a limitation that rests upon them. Principles are concise explanations. There are many occasions where compact sentences help to increase understanding; and there are times when a much more elaborate explanation is necessary to convey an idea. If the meaning of a principle is obscure, either from lack of collateral definitions or from failure of the reader to recognise the significance of thus compressing an area of theory, a concise statement of principle may contribute link to understanding. This only means that ideas are hard to express in words which will surely reach into another mind, and that the other mind, to be receptive to a principle, must have an adequate prior content of detailed, relevant subject matter.

A concept may be incompletely defined as a mental pattern of related ideas which grow into an integrated complex as more and more relevant instances become known. For example, the concept of fixed asset depreciation as a charge which must be recognised in the accounts even though doing so transforms a profit into a loss or a surplus into a deficit) derives from an interwoven complex of ideas about wear, repairs, betterments, replacements, interrelation between asset and expense, and periodic matching of revenues and related costs.

Concepts are much more inclusive than principles or definitions. A mental picture of the pattern that makes up a concept includes recognition of some aspects of what a thing is not. A Principle can not express it. In relation to principles, accounting concepts may be the point of origin of some principles. Infact the interchange between

principles and concepts may be such that it is somewhat misleading to think of the egg as being antecedent to the chicken. The important thing is to be keenly aware that a two-way relation exists. For some purpose it might be most revealing to break up a concept into principles; for other uses, understanding may best be aided by finding a cement to band a group of separable principles into a family group of principles *i.e.* into a concept.

Often, what is referred to as 'postulates' by some writers, are called as 'concepts' or 'principles' by other writers and vice versa. To give a few examples of such conflicting opinions, the views of Belkaoui, Anthony and Reece, Wolk et al. and Financial Accounting Standards Board (USA) have been given below:

ACCOUNTING POSTULATES

1. Entity Postulate
2. Going Concern Postulate
3. Unit of Measure Postulate
4. Accounting Period Postulate

ACCOUNTING PRINCIPLES

1. Cost Principle
2. Revenue Principle
3. Matching Principle
4. Objectivity Principle
5. Consistency Principle
6. Full Disclosure Principle
7. Conservatism Principle
8. Materiality Principle
9. Uniformity and Comparability Principle

Source: Ahmed Belkaoui, Accounting Theory, Harcourt Brace Jovanovich, San Diego, 1985. Chapter 6.

ACCOUNTING CONCEPTS

- | | |
|----------------------|-----------------|
| 1. Money Measurement | 7. Conservatism |
| 2. Entity | 8. Realisation |
| 3. Going Concern | 9. Matching |
| 4. Cost | 10. Consistency |
| 5. Dual-Aspect | 11. Materiality |
| 6. Accounting Period | |

Source: Roben N. Anthony and James S. Reece, Accounting Principles. Richard D. Irwin, 1991, p.22.

POSTULATES

1. Going Concern
2. Time Period
3. Accounting Entity
4. Monetary Unit

PRINCIPLES

Input-Oriented Principles

- I. General Underlying Rules of Operation
 1. Recognition
 2. Matching
- II. Constraining Principles
 1. Conservatism
 2. Disclosure

3. Materiality
4. Objectivity (also called Verifiability)

Output-Oriented Principles

- I. Applicable to Users
 1. Comparability
- II. Applicability to Preparers
 1. Consistency
 2. Uniformity

Source: Harry I. Wolk, Iere R. Francis and Michael G. Teamey, *Accounting Theory, A Conceptual and institutional Approach*, Ohio: South-Western Publishing Co., 1992, p.121.

FUNDAMENTAL CONCEPTS OF ACCOUNTING

- | A. Assumptions or Accounting | B. Principles or Accounting |
|-------------------------------------|------------------------------------|
| 1. Separate-entity assumption. | 1. Cost Principle. |
| 2. Continuity assumption. | 2. Revenue Principle. |
| 3. Unit-of-measure assumption. | 3. Matching Principle. |
| 4. Time-period assumption. | 4. Full-disclosure Principle. |

Source: Financial Accounting Standards Board, USA, *Statement of Financial Accounting Concepts No. 6, Elements of Financial Statements*. December 1985.

Note: Financial Accounting Standards Board (FASB) USA refers to assumptions and principles of accounting as 'concepts of accounting.'

Thus, it can be observed that finding a precise terminology has always been one of the most difficult task in accounting. Further, the lack of agreement about their precise meaning has affected, to some extent, the attempts made towards developing a theory for financial accounting.

The purpose of this chapter is not to engage the readers on a debate of suitable terminology but to explain something which are widely accepted as of greatest importance and widest applicability, whether as postulates, concepts or principles. But before this, an attempt has been made to define the terms postulates, concepts and principles.

Postulates

Accounting postulates are basic assumptions concerning the business environment They are generally accepted as self-evident truths in accounting. Postulates are established or general truths which do not require any evidence, to prove them. They are the propositions taken for granted. As basic assumptions postulates cannot be overflow. They serve as a basis for inference and a foundation for a theoretical structure that consists of propositions derived from them. Postulates in accounting are few in numbers and stem from the economic and political environments as well as from the customs and underlying viewpoints of the business community.

Balkaouil defines accounting postulates:

"as self-evident statements or axioms, generally accepted by virtue of their conformity to the objectives of financial statements, that portray the economic, political, sociological and legal environment in which accounting must operate."

American Institute of Certified Public Accountants (USA) observes:

"Postulates are few in numbers and are the basic assumptions on which principles rest. They necessarily are derived from the economic and political environment and from the modes of thought and customs of all segments of the business community. The profession, however, should make clear their understanding and interpretation of what they are, to provide a meaningful foundation for the formulation of principles and the development of rules or other guides for the application of principles in specific situations."

According to Hendriksen:

"Postulates are basic assumptions or fundamental propositions concerning the economic, political, and sociological environment in which accounting must operate. The basic criteria are that (1) they must be relevant to the development of accounting logic, that is, they must serve as a foundation for the logical derivation of further propositions, and (2) they must be accepted as valid by the participants in the discussion as either being true or

providing a useful starting point as an assumption in the development of accounting logic. It is not necessary that the postulates be true or even realistic. For example, the assumption in economics of a perfectly competitive society has never been true, but has provided useful insights into the working of the economic system. On the other hand, an assumption of a monopolistic society leads to different conclusions that may also be useful in an evaluation of the economy. The assumptions that provide the greatest degree of prediction may be more useful than those that are most realistic."

Concepts

Accounting concepts are also self-evident statements or truths. Accounting concepts are so basic that people accept them as valid without any questioning. Accounting concepts provide the conceptual guidelines for application in the financial accounting process, *i.e.*, for recording, measurement, analysis and communication of information about an organisation. These concepts provide help in resolving future accounting issues on a permanent or a longer basis, rather than trying to deal with each issue on an ad-hoc basis. The concepts are important because they (a) help explain the "why" of the accounting (b) provide guidance when new accounting situations are encountered and (c) significantly reduce the need to memorise accounting procedures when learning about accounting.

Principle

Accounting principles are general decision rules derived from the accounting concepts. According to AICPA (USA), principle means "a general law or rule adopted or professed as a guide to action; a settled ground or basis of conduct or practice." Principles are general approaches used in the recognition and measurement of accounting events. Accounting principles are characterised as 'how to apply' concepts. Anthony and Reece Comment:

"Accounting principles are man-made. Unlike the principles of physics, chemistry and other natural sciences, accounting principles were not deducted from basic axioms, nor can they be verified by observation and experiment. Instead, they have evolved. This evolutionary process is going on constantly; accounting principles are not eternal truths."

A principle is an explanation concisely framed in words to compress an important relationship among accounting ideas into a few words. Principles are concise explanations. Accounting principles do not suggest exactly as to how each transaction will be recorded. This is the reason that accounting practices differ from one enterprise to another. The differences in accounting practices is also due to the fact that GAAP (generally accepted accounting principles) provides flexibility about the recording and reporting of business transactions.

According to Wolk et al., accounting principles can be divided into two main types:

- i. Input-oriented principles are broad rules that guide the accounting function. Input-oriented principles can be divided into two general classifications: general underlying rules of operation and constraining principles. As their names imply, the former are general in nature while the latter are geared to certain specific types of situations.
- ii. Output-oriented principles involve certain qualities or characteristics that financial statements should possess if the input-oriented principles are appropriately executed. Accounting principles influence the development of accounting techniques which are specific rules to record specific transactions and events in an organisation.

To explain the relationship among postulates, concepts and principles and accounting techniques, the example of cost principle is taken. Cost concept or principle emphasises historical cost which is based on going concern postulate and the going concern postulate says that there is no point in revaluing assets to reflect current values since the business is not going to sell its assets.

ACCOUNTING POSTULATES

1. **Entity Postulates.** The entity postulate assumes that the financial statements and other accounting information are for the specific business enterprise which is distinct from its owners. Attention in financial accounting is focused on the economic activities of individual business enterprises. Consequently, the analysis of business transactions involving costs and revenue is expressed in terms of the changes in the firm's financial conditions. Similarly, the assets and liabilities devoted to business activities are entity assets and liabilities. This postulate defines the accountant's area of interest and limits the number of objects, events, and their attributes that are to be included in financial statements. The transactions of the enterprise are to be reported rather than the transaction of the enterprise's owners. The postulate, therefore, enables the accountant to distinguish between personal and business transactions. The postulate applies to sole proprietorship, partnerships, companies, and small and large enterprises. It may also apply to a segment of a firm, such as division, or several firms, such as when interrelated firms are consolidated.

One approach to the definition of the accounting entity is to determine the economic unit that has control over

resources, accepts responsibilities for making and carrying out commitments, and conducts economic activity. This is the basic view of AICPA's Accounting Research Study No.1 when it states that "economic activity is carried on through specific units or entities." Another approach to define an accounting entity is in terms of the economic interests of various users rather than the economic activities and administrative control of the unit. This approach is user-oriented rather than firm-oriented. The interests of the users rather than the economic activities of the firm define the boundaries of the accounting entity and the information to be included in the financial statements. This view is held by the American Accounting Association's Concepts and Standards Research Committee on the Business Entity Concept (1964) which states, "the boundaries of such an economic entity are identifiable (1) by determining the interested individual or group, and (2) by determining the nature of that individual's or that group's interests."

Both approaches may lead to the same conclusions, but the user approach may lead to a selection of different information than the economic activity approach; and it may extend the boundaries of the accounting entity to include all the potential informational needs of users. For example, information generated by the possible adoption of inflation accounting, human resource accounting, social responsibility reporting, business forecasts reporting may be more easily included in the financial reports under the user rather than the firm approach to the definition of an accounting entity.

The assumption of a business entity somewhat apart and distinct from the actual persons conducting its operations, is a conception which has been greatly deplored by some writers and staunchly defended by others. The distinction between the business entity and outside interests is a difficult one to make in practice in those businesses in which there is a close relationship between the business and the people who own it. In the case of small firms where the owners exert day-to-day control over the affairs of the business and personal and business assets are intermingled, the definition of the business activity is more difficult for financial as well as managerial accounting purposes.

However, in the case of a company, the distinction is often quite easily made. A company has a separate legal entity separate from persons who own it. One possible reason for making distinction between the business entity and the outside world is the fact that an important purpose of financial accounting is to provide the basis for reporting on stewardship. Owners, creditors, banks and others entrust funds to management and management is expected to use these funds effectively. Financial accounting reports are one of the principal means to show how well this responsibility, or stewardship, has been discharged. Also, one entity may be a part of a larger entity. For example, a set of accounts may be prepared for different major activities within a large organisation, and still another set of accounts may be prepared for the organisation as a whole.

2. **Going Concern Postulate.** An accounting entity is viewed as continuing in operation in the absence of evidence to the contrary. Because of the relative permanence of enterprises, financial accounting is formulated assuming that the business will continue to operate for an indefinitely long period in the future. Past experience indicates that continuation of operations is highly probable for most enterprises although continuation can not be known with certainty. An enterprise is not viewed as a going concern, if liquidation appears imminent.

The going concern postulate justifies the valuation of assets on a non-liquidation basis and forms the basis for depreciation accounting. First, because neither current values nor liquidation values are appropriate for asset valuation, the going concern postulate calls for the use of historical cost for many valuations. Second, the fixed assets and intangibles are amortised over their useful life rather than over a shorter period in expectation of early liquidation.

The significance of going concern concept can be indicated by contrasting it with a possible alternative, namely, that the business is about to be liquidated or sold. Under the later assumption, accounting would attempt to measure at all times what the business is currently worth to a buyer; but under the going concern concept, there is no need to do this, and it is in fact not done. Instead, a business is viewed as a mechanism for creating value, and its success is measured by the difference between the value of its outputs (*i.e.* sales of goods and service) and the cost of resources used in creating those outputs.

The going concern assumption leads to the corollary that individual financial statements are part of a continuous, interrelated series of statements. This further implies that data communicated are tentative and that current statements should disclose adjustments to past-year statements revealed by more recent developments.

3. **Money Measurement Postulate.** A unit of exchange and measurement is necessary to account for the transactions of business enterprises in a uniform manner. The common denominator chosen in accounting is the

monetary unit. Money is the common denominator in terms of which the exchangeability of goods and services, including labour, natural resources, and capital, are measured. Money measurement postulate holds that accounting is a measurement and communication process of the activities of the firm that are measurable in monetary terms. Obviously, financial statements should indicate the money used.

Money measurement postulate implies two limitations of accounting. First, accounting is limited to the production of information expressed in terms of a monetary unit; it does not record and communicate other relevant but non-monetary information. Accounting does not record or communicate the state of chairman's health, the attitude of the employees, or the relative advantage of competitive product so the fact that the sales manager is not on speaking terms with the production manager. Accounting therefore does not give a complete account of the happenings in a business or an accurate picture of the condition of the business. Accounting information is perceived as essentially monetary and quantified, while non-accounting information is non-monetary and non-quantified. Although accounting is a discipline concerned with measurement and communication of monetary activities, it has been expanding into areas previously viewed as qualitative in nature. In fact, a number of empirical studies refer to the relevance of non-accounting information compared with accounting information.

Secondly, the monetary unit postulate concerns the limitations of the monetary unit itself as a unit of measure. The primary characteristics of the monetary unit-purchasing power, or the quantity of goods or services that money can acquire-is of concern. Traditionally, accounting theory has dealt with this problem by stating that the unit of measure postulate is also a "stable monetary postulate" in the sense that the postulate assumes either that the purchasing power of the monetary unit is stable over time or that the changes are not significant. While still accepted for current financial reporting, the stable monetary unit postulate is the object of continuous and persistent criticisms.

4. **Accounting Period Postulate.** The financial accounting provides information about will economic activities of an enterprise for specified time periods that are shorter than the life of the enterprise. Normally the time periods are of equal length to facilitate comparisons. The time period is identified in the financial statements. The time periods are usually twelve months in length. Some' companies also issue quarterly or half yearly statements to shareholders. The are considered to be interim, and essentially different from annual statements For management use, statements covering shorter periods such as a month or week may be prepared.

Dividing business activities into specific time periods creates a number of measurement problems in financial accounting such as allocation of cost of an asset to specific periods, determining income and costs associated with long term contracts covering several accounting periods, treatment of research and development costs etc. Accounting measurements must be resolved in the light of particular circumstances. There is no easy, general solution. The accountant and businessman rely upon their experience, knowledge, and judgement to come to the appropriate answer.

ACCOUNTING PRINCIPLES

Accounting principles are listed as follows:

1. **Cost Principle.** The cost principle implies the acquisition cost, or historical cost, which is recognised as the appropriate valuation basis for recognition of the acquisition of all goods and services, expenses, costs, and equities. In other words, an item is valued at the exchange price at the date of acquisition and shown in the financial statements at that value or an amortised portion of it. For accounting purposes, business transactions are normally measured in terms of the actual prices or costs at the time the transaction occurs. That is, financial accounting measurements are primarily based on exchange prices at which economic resources and obligations are exchanged. Thus, the amounts at which assets are listed in the accounts of a firm do not indicate what the assets could be sold for. However, some accountants argue that accounting would be more useful if estimates of current and future values were substituted for historical costs under certain conditions. The extent to which cost and value should be reflected in the accounts is central to much of the current accounting controversy.

The historical cost concept implies that since the business is not going to sell its assets as such there is little point in revaluing assets to reflect current values. In addition, for practical reasons, the accountant prefers the reporting of actual costs to market values which are difficult to verify. By using historical costs, the accountant's already difficult task is not further complicated by the need to keep additional records of changing market value. Thus, the cost concept provides greater objectivity and greater feasibility to the financial statements.

2. **Dual-Aspect Principle.** This concept lies at the heart of the whole accounting process. The Accountant records events affecting the wealth of a particular entity. The question is-which aspect of this wealth are

important? Since an accounting entity is an artificial creation, it is essential to know to whom its resources belong or what purpose they serve. It is also important to know what kind of resources it controls e.g. cash, buildings or land. Recording systems have, therefore, developed so as to show two main things: (a) the source of wealth and (b) the form it takes.

Suppose Mr. X decides to establish a business and transfers Rs. 5000 from his private bank account to a separate business account. He might record this event as follows:

Business Entity Records			
<i>(Liabilities)</i>		<i>(Assets)</i>	
Source of wealth		Form of wealth	
X's capital	5000	Cash at Bank	5000

Clearly the source of wealth must be numerically equal to the form of wealth. Since they are simply different aspects of the same thing *i.e.* in the form of an equation: S (sources) must equal F (forms).

Moreover, any transaction or event affecting the wealth of entity must have two aspects recorded in order to maintain the equality of both sides of the accounting equation. If business has acquired an asset, it must have resulted in one of the following:

- a. Some other asset has been given up.
- b. The obligation to pay for it has arisen.
- c. There has been a profit, leading to an increase in the amount that the business owes to the proprietor, or
- d. The proprietor has contributed money for the acquisition of asset.

This does not mean that a transaction will affect both the source and form of wealth. There are four categories of events affecting the accounting equation such that:

- a. Both sources and forms of wealth increase by the same amount.
- b. Both sources and forms of wealth decrease by the same amount.
- c. Some forms of wealth increase while others decrease without any change in the source of wealth.
- d. Some sources of wealth increase while others decrease without any change in the form in which wealth is held.

The example given above illustrates category (a) since the commencing transaction for the entity results in the source of wealth and form of wealth, cash, both increasing from zero to Rs.5000. By contrast, X might decide to withdraw Rs.1000 cash from the business. Then financial position of business entity would result:-

<i>(Liabilities)</i>		<i>(Assets)</i>	
Source of Wealth		Form of wealth	
Xa's capital	4000	Cash	4000

It is essential to appreciate why both sides of the equation decrease. By taking out cash, X automatically reduces his supply of private finance to the business and by the same amount.

Suppose now that Mr. X buys stocks of goods for Rs. 1500 with the available cash. His supply of capital does not change, but the composition of the business assets does,

<i>Source of Wealth</i>		<i>Form of wealth</i>	
Xa's capital	4000	Stocks	1500
		Cash	2500
	-----		-----
	4000		4000
	-----		-----

The two aspects of this transaction are not in the same direction but compensatory, an increase in stocks offsetting a decrease in cash similarly sources of wealth also may be affected by a transaction. Thus, if X gives his son Y, a Rs. 1000 share in the business by transferring part of his own interest, the effect is as follows:

<i>Sources of wealth</i>		<i>Forms of wealth</i>	
X's capital	3000	Stocks	1500
Y's capital	1000	Cash	2500
	-----		-----
	4000		4000
	-----		-----

If however, X gives Y Rs. 1000 in cash privately and Y then puts it into the business both sides of equation would be affected. Y's capital of Rs. 1000 being balanced by an extra Rs. 1000 in cash, X's capital remaining at Rs. 4000.

3. **Accrual Principle.** This is known as realisation concept also. According to Financial Accounting Standards Board, "accrual accounting attempts to record the financial effects on an enterprise of transactions and other events and circumstances that have cash consequences for the enterprise in the periods in which those transactions, events, and circumstances occur rather than only in the periods in which cash is received or paid by the enterprise. Accrual accounting is concerned with the process by which cash expended on resources and activities is returned as more (or perhaps less) cash to the enterprise, not just with the beginning and end of that process. It recognises that the buying, producing, selling and other operations of an enterprise during a period, as well as other events that affect enterprise performance, often do not coincide with the cash receipts and payments of the period."

A business enterprise's economic activity in a short period seldom follows the simple form of a cycle from money to productive resources to product to money. Instead, continuous production, extensive use of credit and long-lived resources, and over-lapping cycle of activity complicate the evaluation of periodic activities. As a result, non-cash resources and obligations change in time periods other than those in which money is received or paid. Recording these changes is necessary to determine periodic income and to measure financial position. This is the essence of accrual accounting.

Thus, accrual accounting is based not only on cash transactions but also on credit transactions, barter exchanges, changes in prices, changes in the form of assets or liabilities, and other transactions, events, and circumstances that have cash consequences for an enterprise but involve no concurrent cash movement. Although it does not ignore cash transactions, accrual accounting is primarily accounting for non-cash assets, liabilities, revenues, expenses, gains and losses.

Effect of Accrual Principle on the Valuation of Assets. Accounting is frequently described as being primarily a process of periodic income determination, not one of asset valuation. Because of the significance attached to the process of periodic income determination, the valuation of assets for balance sheet purposes is in many cases relegated to a position of secondary importance. As a result of the attention which is focused on revenue realisation and cost matching, unrealised assets are viewed as cost residues chargeable to the future revenue which it is anticipated they will produce. When the applicable realisation test has been met, appropriate costs are transferred from the balance sheet to the income statement. Prior to this point assets are in essence deferred costs. Thus, it is the realisation convention which also controls the valuation of these assets because of the distinction it makes between realised and unrealised elements of revenue. In other words, the valuation of unrealised assets is not an independent process; rather, it is inextricably tied to the process of periodic income determination. The fact that the balance sheet is referred to as a connecting link between successive income statements further amplifies the extent to which the valuation of assets is dependent on the process of periodic income determination and, therefore, on the realisation convention.

4. **Conservatism.** This concept is often described as "anticipate no profit and provide for all possible losses." This characterisation might be viewed as the reactive version of the minimax managerial philosophy, i.e. minimise the chance of maximum losses. The concept of accounting conservatism suggests that when and where uncertainty and risk exposure so warrant, accounting takes a wary and watchful stance until the appearance of evidence to the contrary. Accounting conservatism does not mean to intentionally understate income and assets; it applies only to situations in which there are reasonable doubts. For example, inventories are valued at the lower of cost or current replacement value. Backer explains the accounting doctrine of conservatism as follows:

"In its application to the earnings statement, conservatism encourages the recognition of all losses that have occurred or are likely to occur but does not acknowledge gains until actually realised. The procedure of reducing inventory values when market has declined below cost but the failure to countenance "write-ups" under reverse

conditions can be attributed to conservatism. The early amortisation of intangible assets and the restrictions against recording appreciation of assets have also, at least to some extent, been motivated by conservatism. Failure to recognise revenue until a sale has transferred is still another manifestation of conservatism.

Secret reserves and intentional understatement of assets, formerly common, are no longer considered proper application of conservatism. Rather, accountants view conservatism as a quality of judgement to be exercised in evaluating the uncertainties and risk present in a business entity to assure that reasonable provisions are made for potential losses in the realisation of recorded assets and in the settlement of actual and contingent liabilities. A policy of conservatism also underlies non-capitalisation of costs incurred for research and development, search for and development of natural resources, start up of new equipment fixed costs of production, market development, and various similar items. In a study conducted by Backer, it has been found that U. S. security analysts and bankers expressed their over-weening support for a policy of conservatism in accounting practice:

“Research findings suggest that accounting conservatism is something more than a bias based on tradition and that there is a rationale behind the widespread support of this doctrine. Bankers are concerned with loan safety and their experience indicates that conservatism furnishes an additional margin of protection. Security analysts prefer to rely on a conservative constructed income base as a guide to future income projections. They regard the risk of a passbook overstatement of income to be greater than that of an under statement. Analysts generally comment adversely on the quality of earnings of companies that employ unconservative accounting practices.”

Conservatism concept is very vital in the measurement of income and financial position of a business enterprise. The accountant avoids the recognition and measurement of value changes and income until such time as they may be evidenced readily. This concept may result in stating net income and net asset at amounts lower than would otherwise result from applying the pervasive measurement principles. This concept is extremely difficult to standardise or regulate. It may vary from entity to entity, depending on the particular attitudes of the different accountants and managers concerned. This concept is defended due to the uncertainty of the future, which in turn raises doubts about the ultimate realisability of unrealised value increments. It is argued that accountants are practical men who have to deal with practical problems, and so they have a tendency to avoid the somewhat speculative area of accounting for unrealised gains. They have also inherited role of acting as a curb on the enthusiasm of businessmen who want to report to ownership as successful story as possible. Also, traditional accounting reports are intended primarily for stewardship purposes, a function which incurs no legal obligation to report beyond the facts of realised transaction. Sterling and Arthur Anderson and Co., have stated that it (conservatism) is fundamental which dominates all other accounting principles.

5. **Matching Principle.** The matching concept in financial accounting is the process of matching (relating) accomplishments or revenues (as measured by the selling prices of goods and services delivered) with efforts or expenses (as measured by the cost of goods and services used) to a particular period for which the income is being determined. This concept emphasises which items of cost are expenses in a given accounting period. That is, costs are reported as expenses in the accounting period in which the revenue associated with those costs is reported. For example, when the sales value of some goods is reported as revenue in a year, the cost of that goods would be reported as an expense in the same year.

Matching concept needs to be fulfilled only after realisation (accrual) concept has been completed by the accountant; first revenues are measured in accordance with the realisation concept and then costs are associated with these revenues. Costs are matched with revenues, not the other way around. The matching process, therefore, requires cost allocation which is significant in historical cost accounting. Past (historical) costs are examined and, despite their historic nature, are subjected to a procedure whereby elements of cost regarded as having expired service potential are allocated or matched against relevant revenues. The remaining elements of costs which are regarded as continuing to have future service potential are carried forward in the historical balance sheet and are termed as assets. Thus the balance sheet is nothing more than a report of unallocated past costs waiting expiry of their estimated future service potential before being matched with suitable revenues.

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 costs concerned. A variety of allocation practices is available, and each one is capable of producing different cost aggregates to match against revenues (the main areas of difficulty affecting inventory valuation and fixed assets depreciation policies). Matching is, therefore, not as easy or as

straight forward as it looks, and consequently much care and expertise is required to give the allocated figure sufficient credibility to satisfy their users.

6. **Objectivity Principle.** This principle holds that accounting must be carried out on an objective and factual basis. Entries in the books of accounts and the data reported in the financial statements must be based upon objectively determined evidence. Strict adherence to the objectivity concept is necessary to maintain the confidence of the users of the financial statements. This is also necessary to minimise the possibility of error and intentional fraud or bias.
7. **Consistency Principle.** The principle of consistency aims at making the financial statements more comparable and useful. The convention holds that in accounting processes, all concepts, principles and measurement approaches should be applied in a similar or consistent way from one period to another period in order to ensure that the data reported in financial statements are reasonably comparable over time. For example the principle of valuing stock at cost or market price which ever is less" should be followed year after year to obtain comparable results. Similarly if it is once decided to charge depreciation on fixed or straight line method, it should be done year after year. The objective of consistency is to eliminate the personal bias of the accountant in reporting information. The rationale behind this convention is that frequent changes in accounting treatment would make the financial statements unreliable to their users, such as management, banks and investors.

This convention permits changes in accounting techniques if it is likely to improve the measurement of financial results and financial position, e.g. switching over from the FIFO (first in first out) method to LIFO (last in first out) method of inventory valuation, or changing over to diminishing balance method from straight line method of charging depreciation. However if a change is made, then its effect on profit and financial position as compared to the previous year should be clearly stated in the financial statements.

8. **Full Disclosure Principle.** This convention specifies that there should be complete and understandable reporting in the financial statements of all significant information relating to the economic affairs of the entity. All information which is of material interest to the owner, managers, investors etc. should be disclosed in accounting statements. There is a consensus in accounting that the disclosure should be full, fair and adequate.

'Full' refers to a complete and comprehensive presentation of information ; 'fair' implies an ethical constraint dictating an equitable treatment of users; and 'adequate' connotes a minimum set of information to be disclosed.

The convention of full disclosure is becoming popular because most of the big units in these days are organised in the form of joint stock companies where the ownership is divorced from management. The Companies Act 1956 makes ample provisions for the disclosure of essential information so that there is no chance of any material information being left out.

9. **Materiality Principles.** The concept of materiality provides that only material information should be disclosed in the financial statement. Materiality is essentially a matter of professional judgement. The American Institute of Certified Public Accountant states that a statement, fact or item is material, if giving full consideration to the surrounding circumstances, as they exist at the time, it is of such a nature, that its disclosure, to the method of treating it, would be likely to influence or to make, a difference in the conduct and judgement of a reasonable person. Materiality depends upon the amount involved in the transaction. For example a small expenditure of Rs. 10 for the purchase of a waste paper box may be treated as an expense rather than asset. Similarly the amounts due to creditors and receivable from debtors are not disclosed in the balance sheet against their individual names. Instead, these accounts are clubbed into sundry creditors and debtors accounts.

GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

Financial accounting follows a set of ground rules or accounting principles (discussed earlier) in presenting financial information which are generally known as Generally Accepted Accounting Principles (GAAP). In fact, to be useful financial accounting information should be collected, classified, summarised and reported objectively. The users who use such information and rely on such data have a right to be assured that the data are reliable, free from bias and inconsistencies, whether deliberate or not. For this reason, financial accounting depends on certain guides or standards that have proved useful over the years in accounting and reporting information. In this task, GAAP plays a vital role and financial accounting information can be meaningful only when prepared according to some agreed-on standards and procedures, i.e. Generally Accepted Accounting Principles. Accounting Principles Board of USA states:

"Generally accepted accounting principles incorporate the consensus at a particular time as to which economic resources and obligations should be recorded as assets and liabilities by financial accounting, which changes in assets and liabilities should be recorded, when these changes are to be recorded, how the assets and liabilities and changes in them should be

measured, what information should be disclosed and which financial statements should be prepared.”

GAAP guide the accounting profession in the choice of accounting techniques and in the preparation of financial statements in a way considered to be good accounting practice. GAAP are simply guides to action and may change overtime. They are not immutable laws like those in the physical sciences. Sometimes specific principles must be altered or new principles must be formulated to fit changed economic circumstances or changes in business practices. In response to changing environments, values and information needs, GAAP are subject to constant examination and critical analysis. Changes in the principles occur mainly as a result of the various attempts to provide solutions to emerging accounting problems and to formulate a theoretical framework for the accounting discipline. Accounting principles originate from problem situations such as changes in the law, tax regulations; new business organisational arrangements, or new financing or ownership techniques. In response to the effect such problems have on financial reports, certain accounting techniques or procedures are tried. Through comparative use and analysis, one or more of these techniques are judged most suitable, obtain substantial authoritative support and are then considered a generally accepted accounting principle. Walgenbach et al comments:

“Because no basic natural accounting law exists, accounting principles have developed on the basis of their usefulness. Consequently the growth of accounting is more closely related to experience and practice than to the foundation provided by ultimate law. As such, accounting principles tend to evolve rather than be discovered, to be flexible rather than precise and to be subject to relative evaluation rather than be ultimate or final.”

Similarly APB Statement No.4 observes:

“Present generally accepted accounting principles are the result of an evolutionary process that be expected to continue in the future...Generally accepted accounting principles change in response to changes in the economic and social conditions, to new knowledge and technology, and to demand of users for more serviceable financial information. The dynamic nature of financial accounting—its ability to change in response to changed conditions—enables it to maintain and increase the usefulness of the information it provides.”

In India, Organisations like Accounting Standards Board (ASB), Institute of Chartered Accountants of India, Department of Company Affairs (Government of India), Securities and Exchange Board of India (SEBI), Institute of Costs and Works Accountants of India, Institute of Company Secretaries, Stock Exchange and the literature each publishes—are instrumental in the development of most accounting principles. In USA, Financial Accounting Standards Board (FASB), American Institute of Certified Public Accountants (AICPA), Securities and Exchanged Commission (SEC), Internal Revenue Service and the American Accounting Association are instrumental in the formulation of accounting principles.

The authority of accounting principles rests on their general acceptance by the accounting profession. The general acceptability of accounting principles is not decided by a formal vote or survey of practising accountants and auditors. An accounting principle must have substantial authoritative support to qualify as generally accepted. Reference to a particular accounting principle in authoritative accounting literature constitute substantive evidence of its general acceptance. The judgements given in an English case *Associated Portland Cement Manufacturers Ltd. Vs. Price Commission* (1974) illustrates the meaning of ‘generally accepted.’ In this case the defendant Price Commission argued that, the term ‘generally accepted’ meant generally adopted or used in practice. The plaintiff company *Associated Portland Cement Manufacturers Ltd.* argued that the term ‘generally accepted’ meant generally recognised by the accounting profession as acceptable, irrespective of the degree of their use. The court supported the company argument. Justice Lord Denning observed; “it seems to me that the phrase (generally accepted) means generally approved accounting principles. It means principles which are generally regarded as permissible or legitimate by the accounting profession. That is sufficient even, though only one company applies in practice.”

SELECTION OF ACCOUNTING PRINCIPLES

Generally Accepted Accounting Principles are primarily relevant to financial accounting. In management accounting, the main objective of using GAAP is to help management in making decision, and in operating effectively and therefore, in the area of management accounting it is frequently useful to depart from accounting principles used in financial accounting. On many occasions, financial accounting data are reassembled or altered to be most useful in solving internal business problems and in making decision. Similarly, different accounting principles may need to be used for financial reporting purposes and income tax reporting purposes. That is, accounting principles useful for determining taxable income under the income tax regulations may differ from the accounting principles used for determining income acceptable for financial reporting, business reporting purposes. The considerations which guide the selection of accounting principles for financial reporting purposes are as follows:

1. **Accurate Presentation.** One of the criteria for assessing the usefulness of accounting information is accuracy in presentation of the underlying events and transactions. This criterion may be used by the firm as a basis for selecting accounting principles and methods. For example, assets have been defined as resources having future service potential and expenses defined as a measurement of the cost of services consumed during the period. In applying the accuracy criterion, the firm would select the inventory cost flow assumption and depreciation method that most accurately measure the amount of services consumed during the period and the amount of services still available at the end of period. As a basis for selecting an accounting principle, this approach has at least one serious limitation. It is difficult to know accurately the services consumed and the service potential remaining. Without this information the accountant cannot ascertain which accounting principles lead to the most accurate presentation of the underlying events. This criterion can serve only as a normative criterion toward which the development and selection of accounting principles should be directed.
2. **Conservatism.** In choosing among alternative generally acceptable principles, the firm may select the set that provides the most conservative measure of net income. Considering the uncertainties involved in measuring benefits received as revenues and services consumed as expenses, some have suggested that a conservative measure of earnings should be provided. Conservatism implies that methods should be chosen that minimize cumulative reported earnings. That is, expenses should be recognised as quickly as possible and the recognition of revenues should be postponed as long as possible. This reporting objective, for example, would lead to selecting an accelerated depreciation method, selecting the LIFO cost flow assumption if periods of rising prices are anticipated, expensing research development cost in the year incurred.
3. **Profit Maximization.** A reporting objective having an effect opposite to conservatism may be employed in selecting among alternative generally accepted accounting principles. Somewhat loosely termed reported profit maximization, this criterion suggests the selection of accounting principles that maximize cumulative reported earnings. That is revenue should be recognized as quickly as possible, and the recognition of expense should be postponed as long as possible. For example, the straight-line method of depreciation would be used, and when periods of rising prices were anticipated, the FIFO cost flow assumption would be selected. The use of profit maximization as a reporting objective is an extension of the notion that the firm is in business to generate profits, and it should present as favourable a report on performance as possible within currently acceptable accounting methods. Some firm's managers whose compensation depends in part on reported earnings, prefer larger reported earnings to smaller. Profit maximization is subject to a similar criticism as the use of conservatism as a reporting objective. Reporting income earlier under the profit maximization criterion must mean that smaller income will be reported in some later period.
4. **Income Smoothing.** A final reporting objective that may be used in selecting accounting principles is income smoothing. This criterion suggests selecting accounting methods that result in the smoothest earnings trend over time. Advocates of income smoothing suggest that if a company can minimize fluctuations in earnings, the perceived risk of investing in shares of its stock will be reduced and, all else being equal, its stock price will be higher. It is significant to note that this reporting criterion suggests that net income, not revenues and expenses individually, is to be smoothed. As a result, the firm must consider the total pattern of its operations before selecting the appropriate accounting principles and methods. For example, the straight-line method of depreciation may provide the smoothest amount of depreciation expense on a machine over its life. If, however, the productivity of the machine declines with age so that revenues decrease in later years, net income using the straight-line method may not provide the smoothest income stream.

Due to the flexibility permitted in selecting accounting principles it is generally now required that business enterprises will disclose the accounting principles used in preparing financial statements, either in a separate statement or as a note to the principal statements.

Although a business firm can use different accounting principle for different purposes this does not necessarily mean that business enterprises may keep more than one set of records to satisfy

the different requirements. In most cases, certain items taken for financial accounting purposes may have to be omitted and certain other items may have to be included for determining taxable income and tax liability. Even if an organisation maintains different sets of records and books, one for financial reporting purposes and the other for income tax reporting purposes, this practice cannot be said to be illegal or unethical. In fact, there is nothing wrong or illegal about keeping separate records to fulfil separate needs, so long as all the records and books are open to examination by the appropriate parties. However, as stated earlier, business enterprises attempt to meet the different requirements of shareholders and investors (through financial reporting) and tax authorities using the same set of data.

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CHAPTER-5

Income Concepts

The measurement of income occupies a central position in accounting. Income measurement is probably the most important objective and function of accounting, accounting concepts, principles and procedures used by a business enterprise. Generally speaking, income represent wealth increase and business success; the higher the income, the greater will be the success of a business enterprise. The following are some of the major areas where income information is practically useful:

- (i) **Income as a guide to dividend and retention policy:** Income information determines as to how much of a business enterprise's periodic income can be distributed to its owners and how much shall be retained to maintain or expand its activities. The income is the maximum amount, which can be distributed as dividends and retained for expansion. However, because of the difference in accrual accounting and cash accounting income, a firm may not distribute the total recognised income as dividends. Liquidity and investment prospects are necessary variables for the determination of dividend policy.
- (ii) **Income as a measure of managerial efficiency:** Income is regarded as an indicator of management's effectiveness in utilizing the resources belonging to the external users. Income tends to provide the basic standard by which success is measured. Thus, income is a measure is a measure to evaluate the quality of management's policy making, decision making, and controlling activities. The True blood Committee Report comments:
 "An objective of financial statements is to supply information useful in judging management's ability to utilize enterprise resources effectively in achieving the primary enterprise goal."
- (i) **Income as guide to future predictions:** Income helps in predicting the future income and future economic events of business enterprise as current income acts to influence future expectations. It helps in evaluating the worth of future investments while making investment decisions.
- (ii) **Income as a means of determining tax:** Income figure determines the tax liability of a business enterprise. How tax is determined is important to management and investors both. The taxation authorities generally accept accounting income as a basis of assessing the tax.
- (iii) **Income as a guide to creditworthiness and other economic decisions:** Credit grantors- individuals and institutional both-require evidence of sound financial status before advancing loans to business enterprises. Income-current and future both-is a relevant data to determine a concern's ability to repay loans and other liabilities at maturity. Besides, income figure is useful in other decision areas also such as pricing, collective bargaining, governmental, social and economic regulation and policies.

INCOME STATEMENT VS. BALANCE SHEET

The relationship between income statement, which reports net income of a business enterprise and balance sheet, which reports financial position, has been a matter of debate and research in accounting. The controversy between the two has had some amount of influence as how income should be measured. The Financial Accounting Standard Board (U.S.A) in its 1976 D.M. entitled Conceptual Framework for Financial Accounting and Reporting: Elements of Financial statements and Their Measurement (para31) comments on this controversy when it says:

"Difference in emphasis over the years has led to two schools of thought about measuring earnings. One view is usually called the balance sheet, asset and liability or capital maintenance view; the other is usually called the income or earnings statement, revenue and expense or matching view. Many of the difference between them in articulated financial statements are matters of emphasis, but some result in significant differences in measures of earnings and statements of financial position."

Articulated financial statements, by definition, are statements in which net income for the period, less distributions to owners, is entered into the balance sheet as the change in owners' equity. It is this that makes the balance sheet balance. Articulated Statements further assume that there are no capital transactions between the enterprise and its owners. The debate between income statement and balance sheet is mainly about the primacy of the income statement or the balance sheet. An example of tank of water has often been used to explain this difference. If water is flowing into and out of a tank at different rates, the net inflow into the tank during a specified period can be measured by comparing the level in the tank at the beginning and at the end of the period, or by measuring the inflow and the

outflow and subtracting one from the other. Assuming there are no leaks or evaporation, the two answers should be the same. Measuring net inflow by comparing the water levels at two points in time corresponds to measuring net income by comparing the owners' wealth at two points in time. The other approach corresponds to measuring net income by matching revenues with expenses.

Many accounting writers and researchers view net income as a quantity to be determined by comparing inputs and outputs, not by looking at the change in wealth during a period. Proponents of the input-output or expense-revenue view of income are not concerned if, as a result, the balance sheet has to accommodate deferred credits that are neither liabilities nor a part of owners' equity, or deferred expenditures that are not economic resources and therefore, not assets. In this view, the balance sheet is simply a list of what is left over after expenses have been matched with revenues. David Solomon's in his recent book *Making Accounting Policy* (1986) supports this view and says:

"... Determining income more or less independently of balance sheet changes has the great advantage of giving management more control over the number that emerges as earnings. It facilitates income smoothing and makes it easier to control the volatility of earnings."

DIFFERENT CONCEPTS OF INCOME MEASUREMENT

Measurement of income, as stated earlier, is probably the most important objective and function of accounting, accounting concepts, principles and procedures used by a business enterprise. Measuring periodic income of a business has, therefore, been a debatable issue among the theorists, researchers, accounting bodies, accounting educators and practitioners. Accordingly, many concepts and approaches have emerged which aim to determine net income of a business for an accounting period. The different concepts of income measurement have led to different types of income, which can be measured for a business enterprise.

The different concepts of income measurement or different types of income are as follows:

- (1) Accounting Income (or Business Income or Accounting concept of Income).
- (2) Economic Income (or Economic Concept of Income).
- (3) Capital Maintenance Income (or Capital Maintenance Concept of Income).

Besides the above concepts or approaches, there are other income concepts such as current value income comprising different valuation bases like replacement costs, current entry price, net realisable value or current exit price etc.

ACCOUNTING INCOME

Accounting income, often referred to as business income or conventional income is measured in accordance with generally accepted accounting principles. The profit and loss account or income statement determines the net income or operating performance of a business enterprise for some particular period of time. Income is determined by following income statement approach, i.e., by comparing sales revenue and costs related to the sales revenue. Net income is determined as follows:

$$\text{Revenue} - \text{Expenses} = \text{Net Income}$$

The net income defined as the difference between revenue and expenses determine the business income of an enterprise. Under the income statements approach, expenses are matched with the revenues and the income statement is the most significant financial statement to measure income of a business enterprise. Thus, business income of an entity represents the difference between the realized revenues arising from the transactions of the period and the corresponding historical costs. Accounting income is the increase in the resources of a business (or other) entity, which results from the operations of the enterprise. In other words, accounting income is the net increase in owner's equity resulting from the operations of a company. It should be distinguished from the capital contributed to the entity. Income is a net concept; it consists of the revenue generated by the business, less losses and expenses that contribute to the production of revenue.

Accounting income is measured in terms of transactions, which the business enterprise enters into with third parties in its operational activities. The transactions relate mainly to revenues 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 of payment of cash, and, if the eventual cash exchanges with third parties are not complete at the moment of measuring income, this incompleteness is allowed and adjustments are made for amounts due by debtors for sales on credit, amounts due to creditors for purchase on credit. Once these adjustments are made, the revenue and costs which have been recognised as having arisen during the defined period are then linked or matched in order to derive accounting income. Accounting income, thus, is computed in terms of matching or related operational rev-

enue and cost. These revenues and costs are derived mainly from recorded business transactions, although they are also subject to the specific application of accounting principles such as those involved in depreciation and inventory accounting. In traditional accounting concept of income, a typical balance sheet describes and depicts unallocated or unmatched past costs as assets of the business.

Procedure of Computing Accounting Income

The procedure for computing accounting income may be summarized as follows:

- (i) **Defining the particular accounting period:** Accounting income refers to the financial performance of the firm for a definite period. The commonly accepted accounting period is either the calendar or natural business year. It should be recognised, however, that income can be determined precisely only at the termination of the entity's life. The preparation of annual financial statements represents somewhat of a compromise between the greater accuracy achieved by lengthening the accounting period and the greater need for frequent operating reports.
- (ii) **Identifying revenues of the accounting period selected:** Accounting income requires the definition, measurement, and recognition of revenues. In general, realization principle is used for recognition of revenues and consequently for the recognition of income. Revenue is the aggregate of value received in exchange for the goods and services of an enterprise. Sales of goods are the commonest form of revenue. In accordance with realization principle, the accountant does not consider changes in value until they have crystallized following a transaction. The realization principle is not applicable in case of unrealized losses, which are recognised, measured, accounted for and subsequently reported prior to realization. There are some other instances where realization principle is ignored and unrealized income is recognised. Some such examples are valuation of properties, long-term contract business.
- (iii) **Identifying costs corresponding to revenues earned:** Accounting concept of income is based on the historical concept. Income for an accounting period considers only those costs, which have become expenses, i.e., those costs which have been applied against revenue. Those costs, which have not, yet expired or been utilized in connection with the realization of revenue are not the costs to be used in computing accounting income. Such costs are assets and appear on the balance sheet. Prepaid expenses, inventories, and plant thus represent examples of deferred unallocated costs.
- (iv) **Matching Principle:** Traditional accounting income is expressed as a matching of revenue and expenditure transaction, and results in a series of residues for balance sheet purposes. Matching principle requires that revenues which are recognised through the application of the realization principle are then related to (or matched with) relevant and appropriate historical costs. The cost elements regarded as having expired service potential are allocated or matched against relevant revenues. The remaining elements of costs which are regarded as continuing to future service potential are carried forward in the traditional balance sheet and are termed as assets. Such asset measurements, together with corresponding measurements of the entity's monetary resources, and after deduction of its various liabilities, give rise to its residual equity or accounting.

Arguments in Favour of Accounting Concept of Income

- (1) Accounting income is very useful in judging the past performance and decisions of management. Also it is useful for control purposes and for making management accountable to shareholders for the use of resources entrusted to it.
- (2) Another argument in favour of historical cost-based income is that it is based on actual and factual transactions which may be verified. Advocates of accounting income contend that the function of accounting is to report fact rather than value. Therefore, accounting income is measured and reported objectively and it is consequently verifiable.
- (3) Accounting concept of income has the benefit of a sound, factual and objective transaction base. Accounting income has stood the test of time and therefore is used by the universal accounting community.
- (4) In times of inflation, which is now a usual feature, alternative income measurement approaches as compared to accounting income could give lower operating income, lower rates of return which could lower share prices of a business firm.
- (5) Income based on historical cost is the least costly because it minimizes potential doubts about information reliability, and effort in preparing the information.

Limitations of Accounting Income

There are certain limitations of the accounting income as given under:—

Firstly, the traditional accounting income is based upon historical cost principle and conventions which may be severally

criticized, e.g., lack of useful contemporary valuations in times of price level changes, inconsistencies in the measurement of periodic income of different firms and even between different years for the same firm due to generally accepted accounting principles. Thus, accounting income could be misleading, misunderstood and irrelevant to users for making investment decisions.

Secondly, validity of business income depends on measurement process and the measurement process depends on the soundness of the judgments involved in revenue recognition and cost allocation and related matching between the two. There is a great deal of flexibility and subjectivity involved in assigning cost and revenue items to specific time periods and using matching concept. According to Spouse, "In most cases matching costs and revenues is a practical impossibility." Spouse describes the process as one similar to judging a beauty contest where the judges cast their votes according to their personal preferences to decide the winner, because no established concepts exist to ascertain beauty, just as there are none to determine proper matching.

Kam argues:

"One of the consequences of the conventional matching principle is that it relegates the balance sheet to a secondary position. It is merely a summary position. It is merely a summary balances that results after applying the rules to determine income. It serves mainly as a repository of unamortized costs. But the balance sheet has an importance of its own; it is the primary source of information on the financial position of the firm. The conventional matching principle is responsible for deferred charges that are not assets and deferred credits that are not liabilities. Traditional accounting principles complicate the evaluation of the financial position of a company when the balance sheet is considered mainly as a dumping ground for balances that someone has decided should not be included in the income statement."

Thirdly, the historical cost concept and realization principle conceal essential information about unrealized income since it is not reported under historical accounting. Unrealized income results from holding assets, which should be reported to provide useful informant about business and its profitability and financial position. It also leads to reports of heterogeneous mixtures of realized income items. This implies that the criteria of relevance and usefulness with regard to unreported information are scarified. Accounting income may have little utility in many decision-making functions, as it does not report all income accumulated to date; it does not report current values; balance sheet is merely a statement of unallocated cost balances and is not value statement.

Components of Accounting Income

A profit and loss account or income statement, as stated earlier, determine the net income or business income of a business enterprise and displays revenues and expenses of the enterprises for a specified period. Therefore, business income has the following two major components or elements:

- (1) Revenue
- (2) Expenses

Besides the revenues and expenses, gains and losses are also considered while determining business income or net profit of an enterprise.

ECONOMIC INCOME

The economic concept of income is based on Hick's concept (1946) of income defined as follows:

"... 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."

Hicks presented his concept of "well offness" as the basis for a rough approximation of personal income. According to Hicks, income is the maximum which can be consumed by a person in a defined period without impairing his "well offness" as it existed at the beginning of the period. "Well offness" is equivalent to wealth or capital. Hick's concept of personal income was subsequently adopted by Alexander and subsequently revised by Solomons to an equivalent concept of corporate profit. Alexander defined income of an enterprise as the maximum amount which a firm can distribute to shareholders during a period and still be as well off at the end of the period as at the beginning."

Economics income may be defined as the operating earnings plus the change in asset values during a time period. Economic income is measured in real terms and results from changes in the value of assets rather than from the matching of revenue and expenses. Like accounting income, it is not based on money values. The "Well offness" is measured by comparing the value of company at two points in terms of the present value of expected future net receipts at each of these two points.

In other words, economic income is the consumption plus saving expected to take place during a certain period, the

saving being equal to the change in economic capital. Economic income may be expressed as follows:

$$EI = C + (K_1 - K_2)$$

where EI = Economic Income

C = Consumption

K_1 = Capital as at period 1

K_2 = Capital as at period 2

Economic income and Hicksian approach follow balance sheet approach of income measurement. The balance sheet approach determines the income as the difference between the value of capital at the opening and closing balance sheets adjusted for the dividend or the additional capital contributed during the year. Under the balance sheet approach income is determined as follows:

$$\text{Income} = \text{Capital at the end minus capital at the beginning of the year plus Dividend or saving during the year minus capital contributed during the year.}$$

It is significant to observe that under economic income and balance sheet approach, different items of assets and liabilities possessed by firm at the beginning as well as at the end of the year are to be valued to determine income for the year. Therefore, income measurement in this approach depend upon the valuation of assets and liabilities.

Therefore, economic income of the business is the amount by which its net worth has increased during the period, adjustments are made for any new capital contributed by its owners or for any distributions made by the business to its owners. This from of words would also serve to define accounting income, in so far as net accounting income is the figure which links the net worth of the business as shown by its balance sheet at the beginning of the accounting period with its net worth as shown by its balance sheet at the end of the period. The correspondence between the two ideas of increased worth is, however, a purely verbal one; for Hicksian income demands that in evaluating net assets on the bases of their unexpired costs. The relationship between these two different concepts of increase in net worth, economic income and accounting income may be summed up in the following manner, by starting with accounting income and arriving at economic income:

Accounting Income

- + Unrealised tangible asset changes during the period
- Realised tangible asset changes that occurred in prior periods
- + Changes in the value of intangible assets
- = Economic Income.

The changes in the value of intangible assets do not refer to the conventional intangible assets found in the balance sheet but to a concept called subjective goodwill arising from the use of expectations in the computation of economic income. The following example illustrates economic income and accounting income.

Assume the following expected net cash flows from the total assets of a firm whose useful remaining life is four years:

Year	0	1	2	3	4
Cash flow (Rs.)	-	7000	8500	10000	12000

Assume an annual depreciation of Rs. 7000 and a discount rate of 5 per cent. Using this discount rate, the present value at the beginning of year 1 would be Rs.32887 computed (using present value tables) as follows:

Capitalised value at beginning of year 1		Capital value at end of year 1	
Rs.7,000 x .9524 =	Rs.6,667	Rs.8,500 x .9524 =	Rs.8,095
Rs.8,500 x .9070 =	Rs.7,710	Rs.10,000 x .9070	Rs.9,070
Rs.10,000 x .8638 =	Rs.8,638	Rs.12,000 x .8638 =	Rs.10,366
Rs.12,000 x .8227 =	Rs.9,872	—	
	Rs.32,887		Rs.27,531

The income for the first year may be computed as follows: Rs.7,000

Add: Capitalised value of total assets at the end of year 1 Rs.27,531

Total value of the firm at the end of year 1	Rs.34,531
Less: Capitalised value of total assets at the beginning of year 1	Rs.32,887
Income for the first year	Rs.1,644

The income for the subsequent years can be computed in the similar manner. The present value income, or economic (for year 1) is Rs.1644 which represents the real increase in the value of the firm in the first year. It is equivalent to 5 per cent of the starting capital of Rs.32887. Because most authors define discount rate as the subjective rate of return Edwards and Bell call the economic income of Rs.1644 the 'subjective profit.' It is significant to note that the variable (e.g., cash flows) included in the capitalised value formula are merely expectations that are subject to change.

We can analyse the difference between the present value or economic income and the accounting income using the previous example. While economic income is an ex ante income based on future cash flow expectations, the accounting income is an ex post or periodic income based on historical value. Table 5.1 presents economic income and accounting income and reconciliation between the two is displayed in Table 5.2.

Table 5.1

Year	Computation of Economic and Accounting Income			
	Capitalised value at the beginning of the year (Rs.)	Capitalised value at the end of the year (Rs.)	Cash flow expected for the year (Rs.)	Economic income 2+3-1
	(1)	(2)	(3)	(4)
1.	32887	27531	7000	1644
2.	27531	20408	8500	1377
3.	20408	11428.8	10000	1020.8
4.	11428	—	12000	571.2
Total economic profit	—	—	—	4613
Total Cash Flow	—	—	37500	—
Total depreciation	—	—	28000	—
Expenses (assumed)	—	—	—	—
Accounting Income	—	—	9500	9500
Subjective goodwill	—	—	—	4887

Table 5.2

Year	Reconciliation of the Economic and Accounting Income		
	Depreciation accounting (Rs.)	Subjective goodwill (Rs.)	Difference (Rs.)
1.	7000	5356.0	(1644)
2.	7000	7123.0	123.0
3.	7000	8979.2	1979.2
4.	7000	11428.8	4428.8
Total	28000	32887.8	4887.0

As Table 5.1 reveals, the economic income for the four-year period is equal to Rs.4613 and the accounting income is equal to Rs.9500. The difference between the economic income and the accounting income is Rs.4887 which is the subjective goodwill. The capitalized value method is deemed useful for such long-term operating decision as capital budgeting and product development. The options yielding the highest positive capitalized values are deemed to be the best methods. Capitalized values of long-term receivable and long-term payables are also used in financial statements. The capitalized value is generally considered an ideal attribute of assets and liabilities, although it presents some conceptual and practical limitations. From a practical point of view, capitalized value suffers from the subjective nature of the expect-

tations used for its computation. From a conceptual point of view, capitalized value suffers from the subjective nature of the expectations used for its computation. From a conceptual point of view, capitalized value suffers from (1) the lack of an adequate adjustment for risk preference of all users, (2) the ignorance of the contributions of other factors than physical assets to the cash flows, (3) the difficulty of allocating total cash flows to the separate factors that made the contribution, and (4) the fact that the marginal present values of physical assets used jointly in operations cannot be added together to obtain the value of the firm.

Limitations of Economic Income

The greatest problem lies in measuring the net assets at the beginning and end of the period, which are required to ascertain income. Several methods of valuation of assets may be suggested: (i) capitalization of the expected future net cash flows or services to be received over the life of the firm, (ii) aggregation of selling prices of the several assets of the firm less the total of the liabilities, (iii) valuation of the firm on the basis of current share market prices applied to the total equity outstanding, and (iv) valuation of the firm by using either historical or current cost for non-monetary assets and adding the present cash value of monetary assets and subtracting liabilities. In certainty, the cash flows and benefits could be determined with accuracy. But certainty is a rare factor, and the expected future cash flows upon which income ex ante (income at the beginning) and ex post (income at the end) depend, are subject to a great deal of uncertainty. In practice, the economic income would be subject to extreme subjectiveness and inaccuracies of the predictions:

Secondly, accurate predictions about the timing of the receipt of future cash flows are difficult to make. Different times of cash flows produce different measures of capital, and thus different income figures. Inaccuracies in forecasting of realization times will therefore produce corresponding inaccuracies in the income measure.

Thirdly, there is a problem regarding the choice of the discount factor used in computing the present values of the future cash flows. Ideally, the discount factor should reflect accurately the time values of the opening and closing capital which will be distorted simply because the correct discount rate has not been used. The variations in the discount factors would lead inevitably to an increase in the subjectiveness of the resulting income figure; different discount factors produce entirely different measures of income.

Fourthly, the economic concept assumes a static situation, i.e., an individual or a business enterprise will attempt to maintain his "well-offness" at a constant level. In fact, it seems reasonable to assume that individual will, on the whole, attempt to maximize their "well-offness" by investing capital in activities which will yield increasing benefits over time. Therefore, in forecasting benefits and cash flows for discounting purposes, a significant problem would be to incorporate degree of growth in the cash flows. The choice of such a growth factor increases the subjectiveness of the economic income.

Edwards and Bell call economic income 'subjective income' and observe that it cannot be satisfactorily applied in practice by business enterprises. The notion of "well-offness" is indeed a matter of individuals' personal preferences. Because of the aforesaid limitations, the concept of economic income has little application to the area of financial accounting and reporting.

Differences Between Accounting Income and Economic Income

The following are the differences between accounting income and economic income:

- (1) Accounting income and economic income basically differ in terms of the measurement used. As Building observes: "accountants measure capital in terms of actualities, as the primary by-product of the accounting income measurement process; and that economist in terms of potentialities, in order to measure economic income." The accountant used market prices (either past or current) in measuring income based upon recorded transactions which may be verified. Current values, if used in accounting income, utilize the historical cost transactions base before updating the data concerned into contemporary value terms. The economist, on the other hand, uses predictions of future flows stemming from the resources which have the subject of past transactions. The accountant basically adopts a totally backward-looking or ex post approach, and consequently ignores potential capital value changes. The economist, on the other hand, is forward-looking in his model and bases his capital value on future events. Under accounting income, the accountant aims to achieve objectivity maximisation while measuring income for reporting purposes. The economist is free of such a constraint and is quite content in his model which may have large-scale subjectivity. As a result, the two income concepts appear to be poles apart in concept and measurement — certainly the accountant would find the economist's model almost impossible to put into practice in financial reporting, despite its great theoretical qualities. On the other hand, the economist would not find the accounting model relevant as a guide to prudent personal conduct.

- (2) The accounting income recognises income only when they have been realised. On the other hand, the economic, because it is based on valuations of all anticipated future benefits, recognises these flows well before they are realised. This means that, at the point of original investment, economic capital will exceed capital by an amount equivalent to the difference between the present value of all the anticipated benefit flows and the value of those resources transacted and accounted for at that time. The difference represents an unrealised gain which will, over time, be recognised and accounted for in computing income as the previously anticipated benefit flows are realised.
- (3) Accounting income is an income resulting from business transactions arising from the cash-to-cash cycle of business operations. It is derived from a periodic matching of revenue (sales) with associated costs. Accounting income is an *ex post* measure — that is, measured ‘after the event.’ In contrast to accounting income, economic income is a concept of income useful to analyse the economic behaviour of the individual. It focuses on maximizing present consumption without impairing future consumption by decreasing economic capital. Economic income is used as a theoretical model to rationalize economic behaviour. In this respect, it is similar to accounting income which measures, in aggregate terms, the results of human behaviour and activity, and which, through use, modifies and influences human behaviour. In other words, economic income aims to rationalize human behaviour while accounting income measures the results of it.
- (4) Conventional accounting income possess a limited utility for decision making purposes because of the historical cost and realization principle which govern the measurement of accounting income. Changes in value are not reported as they occur. Economic concept of income places emphasis on value and value changes rather than historical costs. Economic income stresses the limitations of accounting income for financial reporting and decision-making purposes.

Similarities Between Accounting Income and Economic Income

In spite of the above differences in concept and measurement between accounting income and economic income, there are some similarities between the two:

- (1) Both use the transactions for income measurement.
- (2) Both involve measurement and valuation procedures.
- (3) Capital is an essential ingredient in income determination.
- (4) In a world of certainty and with perfect knowledge, accounting and economic income as measures of better-offness would be readily determinable and would be identical. With such knowledge, earnings for a period would be the change in the present value for the future cash flows, discounted at an appropriate rate for the cost of money.
- (5) Under current cost accounting, the reported income equals economic income in a perfectly competitive market systems. During periods of temporary disequilibrium and imperfect market conditions, current cost income may or may not approximate economic income. When asset market prices move in directions opposite to expected cash flows there tends to be a difference between current cost income and economic income i.e., the assets are overvalued. On the other hand, when asset values move together with expected cash flows, current cost income tends to approximate economic income quite well.

The Trueblood Committee Report comments on accounting income as follows:

“Accounting income or earnings should measure operations and represent the period-by-period progress of an enterprise towards its overall goals. Accounting measurements of earning should recognise the notion of economic better-offness, but should be directed specifically to the enterprise’s success is using cash to generate maximum cash.”

According to Trueblood Committee Report, accounting income, although having some limitations, is preferable:

“... the real world does not afford decision-makers the luxury of certainty. Earnings, therefore, are based on conventions and rules that should be logical and internally consistent, even though they may not mesh with economists’ notions of income. Enterprises have attempted to provide users with measures of periodic earnings.... Since these measures are made without benefit of certainty, they are of necessity imprecise, because they are based on allocations and similar estimates.”

CAPITAL MAINTENANCE INCOME

In Traditional accounting, the concept of accounting income has been recognised widely. Adequate attention has not been given to the capital maintenance concept associated with income measurement. In fact, ‘income measurement’

and 'capital maintenance' are interrelated concepts. Capital maintenance concept of income requires that capital of a business enterprise needs to be maintained intact before income can be distributed. Return on capital (income) is distinguished from return of capital (cost recovery). Capital at the end of a year should be measured in order to determine the amount that can be distributed without impairing the capital that the firm had at the beginning of the year. Capital Maintenance may refer to maintaining capital impact in financial or in physical terms. According to Forker, the capital maintenance concept is viewed merely as a neutral benchmark to be used in determining the surplus which accrues to shareholders as income and implies nothing which ought to be interpreted as suggesting normative behaviour for the management of the enterprise. Choice of maintenance concepts may however be dictated by the preferences of managers and/or owners. The following are the concepts of capital maintenance:

- (1) Financial Capital Maintenance
- (2) General Purchasing Power Financial Capital Maintenance
- (3) Physical or Operating Capital maintenance.

(1) Financial Capital Maintenance

Financial or money capital maintenance pertains to the original cash invested by the shareholders in the business enterprise. According to this concept periodic income should be measured after recovering or maintaining the shareholders' equity intact. Income under this concept is the difference between opening and closing shareholders' equity intact. Income under this concept is the difference between opening and closing shareholder's equity. It is this amount which may be distributed as income without encroaching upon the financial capital of the firm. For instance, the capital of a firm is Rs.15,000 at the beginning of the year and Rs.20,000 at the end of the year in monetary units. Assuming no capital transactions during the year, Rs.5,000 will be the income which can be distributed and still the firm will be well off at the end of the year as at the beginning. The financial capital maintenance concept is reflected in conventional or historical cost accounting. Financial capital maintenance concept assumes a constant (stable) unit of measurement to determine the income by comparing the end-or-the-year capital with the beginning capital. Changes in the price levels during the period is not recognised. Because of this and other underlying principles, income measurement under this concept may not prove to be reliable and useful for decision-making purposes.

(2) General Purchasing Power Financial Capital Maintenance

The concept aims at maintenance the purchasing power of the financial capital by continuously updating this historical cost of assets for changes in the value of money. This concept attempts to show to shareholders that their company has kept pace with general inflationary pressures during the accounting period, by measuring income in such a way as to take account changes in the price-levels. It intends to maintain the shareholders' capital in terms of monetary units of constant purchasing power. It reflects the proprietorship view of the enterprise which demands that the objective of profit measurement should focus on the wealth of equity shareholders. Taking the earlier example, if it assumed that the rate of inflation was 10 percent during the year, the initial Rs.15,000 capital is adjusted in terms of inflation. That is, in the terms of inflation, the capital that needs to be maintained in fact is Rs.16,500, and income will be Rs.3,500 which can be distributed without encroaching the capital of the firm. This approach suggests that the accountant should be aware of the measurement-unit problem that arises in a period of unstable general price-level conditions. Instead of comparing the capital in units of money, it is preferable to compare beginning and ending capital, measured in units of the same purchasing power.

The main drawback of financial capital maintenance concept is that the resulting bottom-line income figure includes holding gains as a component of periodic income. Reflecting holding gains in the income statement may indicate (i) the success of the firm in buying inventories and equipment at prices which have subsequently increased, and (ii) a surrogate of an increase in the exit value or the present value from selling or using the assets in question. On the other hand, inclusion of such holding gains may raise two serious problems. First, the reported income figure, if distributed as dividends, could impair the firm's ability to maintain its current level of operations. Such holding gains can only be available for distribution if the company is liquidated. In the absence of evidence to the contrary, the firm is assumed to be going concern and as such, any holding gains should not be considered income that can be distributed as dividends. The second criticism of the bottom-line income measure is that it may not be useful to investors interested in normal operating results as a basis for predicting future normal operating income. An enterprise that maintains its net assets (capital) at a fixed amount of money in periods of inflation or deflation does not remain equally well-off in terms of purchasing power.

(3) Physical or Operating Capital Maintenance

Physical or operating capital concept is expressed in terms of maintaining operating capability that is, maintaining the

capacity of an enterprise to provide a given physical level of operations. The level of operations may be indicated by the quantity of goods and services of specified quality produced in a fixed period of time. Financial capital maintenance concept — money capital and purchasing power concept both — views the capital of the enterprise from the standpoint of the shareholders as owners. In other words, it recognises the proprietorship concept of the enterprise while measuring income and capital, and applies valuation system which are in conformity with this concept. On the other hand, the physical or operating capacity maintenance concept views capital as a physical phenomenon in terms of the capacity to produce goods or services and considers the problem of capital maintenance from the perspective of the enterprise itself and thus it reflects the entity concept of the enterprises.

Operating capacity concept provides that the income should be measured after productive (physical) capacity of the enterprise has been maintained intact, i.e., after provision has been made for replacing the physical resources exhausted in the course of business operations. Such income can be distributed without impairing the firm's ability to maintain its operating level. This income is also known as "sustainable" income implying that the firm can sustain such income as long as the firm insures the maintenance of its present physical operating capacity. This view is based on the following rationale. Firms produce certain goods or services. To ensure a firm's ability to produce such goods and services, at least at its present operating levels, it is necessary for the firm to maintain its prevailing physical operating capacity. This implies that income should represent the maximum dividend that could be paid without impairing the productive capacity of the firm.

The operating capability concept implies that in times of rising prices increased fund will be required to maintain assets. These funds might not be available if profit is determined without recognition of the rising costs of assets consumed in operations. For example, profit would not be earned on the sale for Rs. 1,000 of 100 units of stock costing Rs. 800 if their replacement cost was Rs. 1,000. In this situation, an outlay of Rs. 1,000 would be required in order to maintain the operating capability of the business in terms of 100 units of stock. In other words, the increase in the cost of the stock necessitates the investment of additional funds in the business in order to maintain it as an operating unit.

The operating capability concept does not imply that the firm should necessarily replace assets with identical items. Business enterprises, being dynamic, may extend, contract, or change their activities in whichever way desired. The concept simply means that the operating capability should be maintained at the same level at the end of as it was at the beginning.

The operating capability concept considers the problem of capital maintenance from the perspective of the enterprise itself. This concept emphasizes current cost accounting.

However, there is a difference of opinion regarding the meaning of maintain physical productive capacity or operating capability. At least three different interpretation are suggested:

- (a) Maintaining identical or similar physical assets that the firm presently owns.
- (b) Maintaining the capacity to produce the same volume of goods and services.
- (c) Maintaining the capacity to produce the same value of goods and services.

The second interpretation implies technological improvements and in this respect is superior to the first interpretation, which essentially assumes the firm will maintain and replace its identical assets, an untenable assumption in light of technological improvements. The third interpretation not only reflects technological changes but also the impact of changes on the selling prices of outputs. Although this might be a highly refined approach, it may well be difficult to implement

On the balance sheet, the physical capacity maintenance concept requires the valuation of the physical assets of the firm at their current cost or lower recovery value (i.e., the higher of present value or net realisable value). To compute income that preserves the physical capital intact, the holding gains and losses resulting from increases or decreases in the current costs of the productive capacity of the firm are treated as "capital maintenance adjustments." Once the necessary capital maintenance adjustment are made, the difference between beginning and ending capital would represent (assuming the ending capital is greater, and in the absence of any capital transactions by the owners) the amount that could be distributed while maintaining the physical capital of the firm intact. In the income statement, the income of the period, under the physical capital maintenance approach, is measured by matching the realised revenues with the current cost of the assets sold or consumed. Such a direct comparison, however, is only possible under a stable monetary situation. When changes in the general level of prices occur, the respective monetary measures of the physical capital amounts must be restated in units of the same purchasing power.

The basic difference between the financial and physical capital maintenance concept using current (replacement)

cost is in the treatment of "holding gains and losses." Under the financial capital maintenance concept, holding gains are reflected as income of the given period, whereas the concept of physical capital maintenance holding gains are shown in the shareholders' equity section of the balance sheet as "capital maintenance adjustments."

The physical capital maintenance concept is useful as a basis for providing information that would assist users in prediction the amounts, timing, and risks associated with future cash flows that could be expected from the firm. Information that enables users to assess whether an enterprise has maintained, increased or decreased its operating capability may be helpful for understanding enterprise performance and predicting future cash flows; in particular, it may help users to understand past changes and to predict future changes in the volume of activity. Also, the physical capacity maintenance concept is consistent with the going concern assumption — by maintaining the firm's ability to continue its normal operations — and the enterprise theory of the firm.

Example

During the year ended 31st December 2002 a company, a Rs.40,000/- equity financed company acquired an asset at a cost of Rs.40,000/-. By 31 December 2002 its replacement cost had risen to Rs.60,000. It was sold on 31st December 2003 for Rs.1,00,000 and at the time of sale, its replacement cost was Rs.65,000/-.

For the purpose of measuring historical cost profit, the profit arising from the sale of the asset (assuming no depreciation) would accrue in the year ended 31 December 2003 and would be calculated as follows:

$$\begin{aligned} \text{HC profit} &= \text{Revenue} - \text{historical cost} \\ &= \text{Rs.1,00,000} - \text{Rs.40,000} \\ &= \text{Rs.60,000} \end{aligned}$$

For the purpose of measuring replacement cost profit three distinct gains are recognized which occur as follows:

- (a) A holding gain in the year ended 31 December 2002 measured as the difference between the replacement cost at 31 December 2002 and the acquisition cost during the year, that is Rs.60,000 – Rs.40,000 = Rs.20,000.
- (b) A holding gain in the year ended 31 December 2003 measured as the difference between the replacement cost at 31 December 2002 and the replacement cost on the date of sale, that is Rs.65,000 – Rs.60,000 = Rs.5,000
- (c) An operating gain resulting directly from the activity of selling measured as the difference between the realized sale price and the replacement cost at the date of sale, that is Rs.1,00,000 – Rs.65,000 = Rs.35,000.

Year ended 31 December	2002	2003
Historical cost profit—	Rs.60,000	
Replacement cost profit Holding gains	Rs.20,000	Rs. 5,000
Current operating gain	—	Rs.35,000

It is clear from this example that the difference between historical and replacement cost relate to the timing of reported gains and losses since the total gain over the two periods is Rs.60000 in each case. Furthermore, the replacement cost concept provides more detailed information than the historical cost profit for performance evaluation. Two arguments for the separation of profit into holding and operating gains have been suggested. First, the two profit categories may be used to evaluate different aspects of management activity. Secondly, they permit better inter-period and inter-firm comparisons.

Holding gains on assets which have not been sold are termed 'unrealized', after sale they are said to be 'realized'. When the concept of maintenance of operating capability is applied no part of the holding gain can be regarded as profit. This should be credited to a capital maintenance reserve, designated current cost reserve by UK's SSAP 6. Assuming all of the Rs.35000 operating profit was distributed as dividends the condensed balanced sheet of the company at 31 December 2003 would appear as follows:

Balance Sheet as at 31st December 2003

(maintaining operating capability)

Share Capital	Rs.40,000	Cash (Rs.100000 – 35000)	Rs.65,000
Current cost reserve	Rs.25,000		
		Rs.65,000	Rs.65,000

If the balance sheet of the company is prepared on a historical cost basis, and assuming the Rs.60000 profit was all distributed a dividends the position would appear as follows:

Balance Sheet as at 31st December 2003
(maintaining money amount)

Share Capital	Rs.40,000	Cash (Rs.100000 – 60000)	Rs.40,000
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This example shows clearly how under the financial maintenance concept capital may be distributed to shareholder to the detriment of the long-term viability of the business.

General or Current purchasing power accounting is not designed to differentiate between operating profits and holding gains. However, it may be used to compute real gain or loss, i.e., the surplus or shortfall between the replacement cost value and what this would have been if it had behaved like prices in general. Taking the above example assume the retail price index at 31 December 2003 has increased by 10 per cent since company bought the asset in question. Real gain is calculated as followed:

Current replacement cost	Rs.65,000
Historical cost adjusted by general index (Rs.40000 x 110/100)	Rs.44,000
	Rs.21,000
Real gain	Rs.21,000

This shows that the company has beaten the general index to make a real gain of Rs.21,000. In maintenance of general purchasing power financial capital, real holding gains from part of profit; the gain exceeds that needed to maintain the purchase which resulted in the gain. Therefore under this concept of capital maintenance Rs.56000 (Rs.21000 + Rs.35000) would be available for distribution as dividends. If the company did take this step the balance sheet based on maintenance of current purchasing power financial capital at 31 December 2003 would appear as follows:

Balance Sheet as at 31st December 2003
(maintaining financial capital in current purchase power)

Share Capital	Rs.40,000	Cash	Rs.40,000
(Rs.40,000 + 10%)		(Rs.1,00,000 – Rs.56,000)	

Monetary Items

In the discussion, so far, attention has been given to physical assets such as property, plant and equipment and stock. These items gain in money value in periods of inflation. Monetary items (e.g., bank balance and liabilities generally), are stated in fixed units of money which are not affected by a change in prices. However, the purchasing power of such items will change with fluctuations in the value of money. When prices are rising the purchasing powers of a bank deposit or an amount due from debtors will be falling and it may be argued that this represents a loss to the business. Conversely the purchasing power represented by the claims of creditors will fall during a period of inflation. It may be argued that such a reduction in the purchasing power of monetary liabilities represents a gain to the business. In order to represent this situation current purchasing power financial statements contain one type of item not represented in historical cost statement — purchasing power gains or losses on monetary items. This item is necessary to maintain financial capital of a company. The treatment of monetary items under the concept to maintaining the operating capability of a company is more complex, because supporters of the maintenance of operating capability are not united on a definition of capital. It is possible to identify seven different basic notions of what is meant by operating capability:

- (a) Physical assets
- (b) Physical assets and monetary assets (excluding fixed or long-term monetary assets).
- (c) Physical assets and all monetary assets.
- (d) Physical assets and all monetary assets minus current liabilities.
- (e) Physical assets and monetary assets (excluding cash) minus creditors.
- (f) Physical assets and net monetary assets.
- (g) Physical assets and all monetary assets minus all liabilities,

UK's SSAP 16 favours concept (e) of maintaining the operating capital of a business firm.

EDWARDS AND BELL'S CONCEPT OF BUSINESS INCOME

Edwards and Bell developed the concept of business income. Business income concept (labeled as Money Income by some writers) is based on replacement cost valuation and recognises only the gains accruing during the period. More specifically, business income comprises, (i) the current operating profit (X) which is the difference between the realised revenues and the corresponding replacement cost, current operating profits is defined as excess over a period of the current value of output sold over the current cost of the related inputs. (ii) the realised and accrued holding gains of the period (Y) and (iii) the unrealised holding gains and losses accruing in the period (W). A holding gain arises whenever the current market value of an asset exceeds its historical cost. Thus, business income (Bi) may be expressed as:

$$Bi = X + Y + W$$

where Bi = Business Income

X = Current operating profit

Y = Realised and accrued holding gains of the period

W = Unrealised holding gain and losses accruing in the period.

Accounting Principles for Business Income

If business income is to be determined, certain accounting principles are to be followed. As stated earlier, business income is defined to include current operating profit and realisable cost savings. Its measurement requires data on the price changes of individual (or small group of) assets and entails the application of the following principles:

- (i) When price changes increases the value of an assets, realisable cost savings should be recorded. These form the capital gains element of business profit. Similarly, when price changes decrease the value of an asset, realisable capital losses should be recorded.
- (ii) When an asset or asset service is used in production, its current cost should be deducted from the current value of output to determine operating profit.

When these principles are applied in the accounts, the fundamental accounting equation is modified from historic cost basis to a current cost basis, resulting into business income. Barring dividends and new contributions of capital by shareholders, the following relationship holds:

$$\begin{array}{r}
 - \text{ Current value of output} \\
 \text{Current value of input} \\
 \hline
 + \text{ Current operating profit} \\
 \text{Realisable capital gains} \qquad \text{Profit and Loss Account}
 \end{array}$$

$$\begin{array}{r}
 \text{Change in current} - \text{Change in current} = \text{Business Income or} \\
 \text{value of assets} \qquad \text{value of liabilities} \qquad \text{change in proprietorship} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \text{Comparative Balance Sheet}
 \end{array}$$

A third principle can be enunciated:

- (iii) The difference between current cost and historic cost of assets or asset services used in production also makes the conversion of what was a realisable gain to a realised gain. This amount should be transferred from the unrealised cost savings account to a realised cost savings account.

Principal (iii) applied in the accounts in conjunction with Principal (i) yields data for realised profit.

Relationship between accounting income and business income

It will be beneficial to understand the relationship between accounting income and business income. Accounting income is defined as the difference between the realised revenues arising from the transactions of the period and the corresponding historical costs. Realised holding gains and losses are included in the accounting income. Realised holding gains and losses may be divided into two elements, first, the holding gains and losses realised and accrued during the period, second, the holding gains and losses realised during the period but accrued during previous periods. More specifically, accounting income (Ai) may be expressed as:

$$Ai = X + Y + Z$$

Where Ai = Accounting income

- X = Accounting Operating profit
- Y = Realised and accrued holding gains of the period
- Z = Realised holding gains of the period accruing in previous periods.

More clearly, the accounting income has the following accounting relationships:

$$\begin{aligned} & \text{Sales (Current values) - Expenses (historic costs)} \\ & = \text{Accounting operating profit + Realised capital gains} \end{aligned}$$

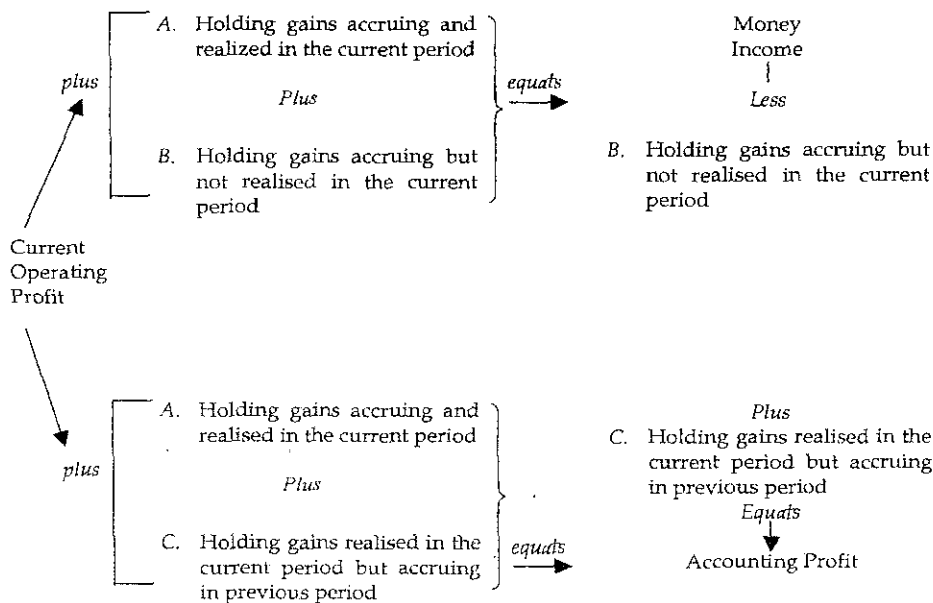
Change in assets – Change in liabilities = Accounting income (profit).
at historic costs at historic costs

Comparing accounting income with business income, it can be inferred that the business income is equal to the accounting income less the realised holding gains of the period accruing in previous periods and plus the unrealised holding gains and losses. The relationship (reconciliation) between business income and accounting income is shown in Figure 5.1. The difference between accounting income and business income is illustrated by the following example. Assume 2000 units are purchased at a price of Re.1 per unit. At P1 (period first) their replacement cost was Rs.2 per unit. The 2000 units were sold at P2 (period II) for Rs.3 per unit when replacement cost was Rs.2.50 per unit. The differences between the accounting income and business income are as follows:

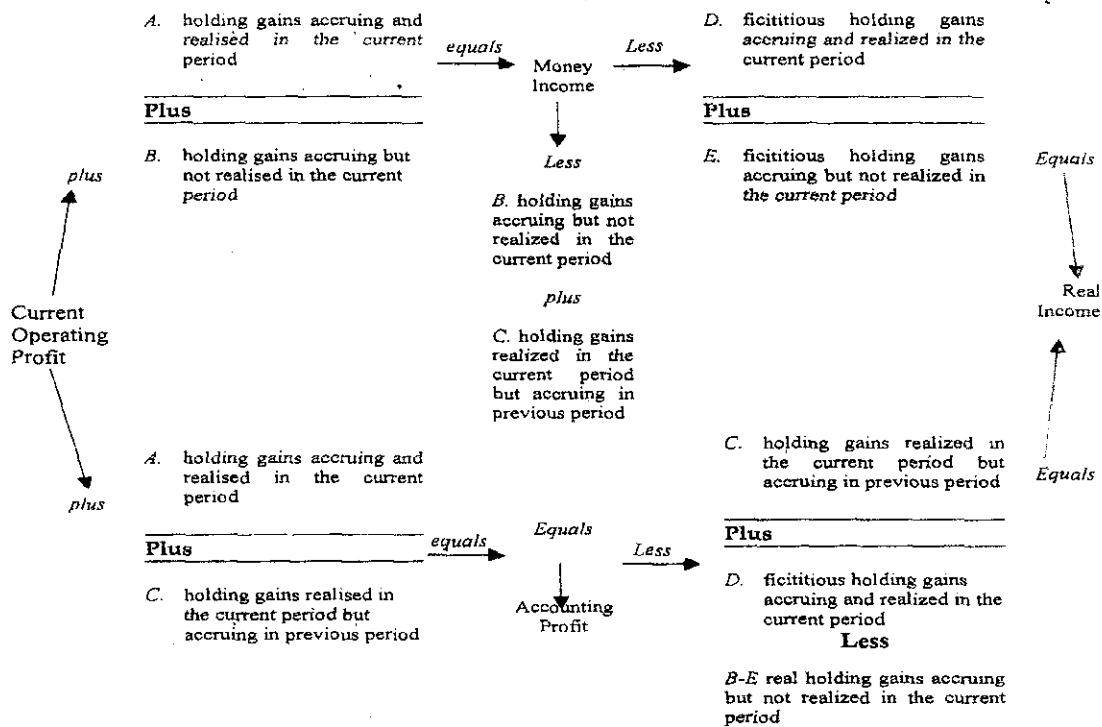
Accounting and Business Income						
Period	X	Y	Z	W	P-1 Ai	P-2 Bi
	(1)	(2)	(3)	(4)		
P-1	–	–	–	2,000	–	2,000
P-2	1,000	1,000	2,000	–	4,000	2,000
Total	1,000	1,000	2,000	2,000	4,000	4,000

Neither business income nor accounting profit makes any allowance for changes in the general price level, both real gains resulting from changes in relative prices and fictitious gains resulting from the effects of a rise in the general price level being regarded as income. This vital question has led to the emergence of real income concept. For a business enterprise, real income can be obtained by separating holding gains into their real and fictitious elements. Figure 5.2 shows the relationship between current operating profit, accounting income, business income and real income.

Figure 5.1
Reconciliation of Business or Money income with Accounting Income



Source: R.H. Parker and G.C. Harcourt, eds., *Readings in the Concept and Measurement of Income* (New York: Cambridge University Press, 1969, p. 6.



Source: R.H. Parker and G.C. Harcourt, eds., *Readings in the Concept and Measurement of Income* (New York: Cambridge University Press, 1969, p. 7).

Figure 5.2

OPERATING INCOME

The current operating concept of income focuses on effective utilization of a business enterprise's resources in operating the business and earning a profit thereon. In this way, operating income measures the efficiency of a business enterprise. In this concept of income, the two terms 'current' and 'operating' are significant. Firstly, the events and transactions relating to the current period are only considered. However, in some cases, the transactions and resources are acquired in prior periods but may be used in the current period. For example, plant and equipment and even the services of workers are acquired in prior periods. The decisions of the current period involve the proper use and combination of those resources. A plant that is judged as obsolete in the current period may have become obsolete in prior periods. If a decision is taken in the current period to sell it, it is not an operating event of the current period. Similarly, detection of an error in the computation of net income for the prior periods is not used in the determination of the current period's net income.

Furthermore, the current operating income recognizes changes relating to normal operations; non-operating activities are not considered. It can be contended that income in terms of normal operating activities better reflects the efficiency of management and facilitates inter-period and inter-firm comparison of business performance. This inclusion of non-operating activities makes the net income number unreliable and an improper device to measure the performance of a business. If non-recurring items arise from normal activities or operations, the current operating income will include them to provide a good measure of the enterprise's earning power and show correct income trends.

To conclude, current operating income is more useful in judging the profitability of a business enterprise, in making predictions and inter-period and inter-firm comparisons. Although it is difficult to classify operating and non-operating items, it is preferable to show them separately. The external users, however, are accustomed to use a single income figure for making economic decisions. In such a case, it can be rightly said that current operating income is a better measure of current operating performance of a business enterprise.

OPERATING AND NON-OPERATING ACTIVITIES

Operating activities are the central means by which the enterprise is expected to obtain income and cash in the future. Results of central, continuing operations, therefore, have a different significance from results associated with other

non-recurring activities and events. No definition of the term operations is likely to produce a clear identification of the activities concerned in all types of business. However, operations normally comprise the provision of goods and services that make up the main business of the enterprise and other activities that have to be undertaken jointly with the provision of goods and services. Such goods and services are produced and distributed at prices that are sufficient to enable a firm to pay for the goods and services it uses and to provide a satisfactory return to its owners. Operations would include for example, exploration for and development of natural resources, manufacture and distribution of goods and the results of trading and investment activities that are part of the main business of the enterprise. Gains and losses on marketable securities maybe excluded from the results of central operations of a manufacturing concern but may be included in central operations for a dealer in securities.

Operating items are generally of recurring nature and non-operating items are generally considered non-recurring and un-predictable. However, that is not always true. Many items may be operating in nature, but not necessarily recurring. Over time payments during a rush period and acquisition of raw material under extremely favourable conditions both are operating events, but are possible non-recurring. Similarly, some non-operating items maybe recurring in nature. Under both the income concepts (current operating performance concept, and all inclusive concept), income from normal activities of the enterprise generally is identified separately from unusual items. The fact that an item, otherwise typical of the normal activities of the enterprise is abnormal in amount or infrequent in occurrence does not qualify the item as unusual (known as extraordinary or special items also). It remains a part of income from the ordinary (normal) activities although separate disclosure of its nature and amount may be appropriate. An example of such an item would be the write-off of a very large receivable from a regular trade customer.

Although information about comprehensive income and its all components are useful for assessments of enterprise performance, net income figure based on recurring (operating) items is generally more useful to economic decision makers in predicting future income and cash flows. Recurring non-operating items are just as important as those recurring operating items that are the result of normal business operations. The distinction between operating and non-operating, however, is more useful for measuring managerial efficiency. The advantage of classifying income items as recurring (operating) or non-recurring is based upon the improved usefulness of the resulting net income figure in the making of predictions by investors. External users and other persons may find it difficult to distinguish between recurring and non-recurring transactions than that of operating and non-operating items.

COMPREHENSIVE INCOME

Concept

Comprehensive income, also known as all-inclusive concept of income, is the change in equity (net assets) of an entity during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by owners and distribution to owners. It is equal to revenues plus gains minus expenses and minus losses. Overall enterprise performance is indicated by the amount of comprehensive income, that is, by increase in the amount of net assets resulting from transactions and other events and circumstances in the period (excluding the effects of net assets resulting from transactions and other events and circumstances in the period (excluding the effects of investments by and distribution to owners). The International Accounting Standards Committee in its IAS 8 (1978) entitled 'Unusual and Prior Period and Items and Changes in Accounting Policies' says:

"Under the all-inclusive concept, transactions causing a net increase or decrease in shareholders interests during the period, other than dividends and other transactions between the enterprise and its shareholders, are included in the net income for the period. Non-recurring items, including unusual items arising in the current period, prior period items, or adjustments related to changes in accounting policies, are included in net income but there may be separate disclosure of the individual amounts."

Solomons observes:

"A truly comprehensive concept of income for a period must include all changes in owners' equity from non over sources that are associated with the period and that can be measured reliably, regardless of the restrictions on recognition imposed by our present GAAP. Obvious candidates for inclusion are holding gains and losses on assets and liabilities, whether realised or not."

Earning, Net Income and Comprehensive Income

In accounting literature, accurate definitions of and relationship between earnings, comprehensive income and present generally accepted concept of net income are not found. Table 5.3 presents the relationship among these three terms

Table 5.3
Net Income, Earnings and Comprehensive Income: Relationship

	Net Income (Rs.)	Earnings (Rs.)	Comprehensive Income (Rs.)
Revenue	100	100	100
Expenses	80	80	80
Gain from unusual source	(3)	(3)	(3)
Income from Continuing Operations	23	23	23
Loss on discontinued Operations	-2	-2	-2
Extraordinary loss	-6	-6	-6
Cumulative effect on prior years of a change in accounting principle	-2	—	-2
Other non owner change in equity (e.g., recognised holding gains)			+1
Net Income	13		
Earnings		15	
Comprehensive Income			14

Source: FABB, Concept No.5.

As it is clear from Table 5.3, the difference between net income as presently accepted and earnings is not a fundamental one. The difference is the inclusion in net income and the exclusion from earnings of the cumulative effect of certain accounting adjustments relating to past periods, e.g., adjustments arising from a change in an accounting principle such as change in the method of pricing inventory. In other respects, net income and earnings are synonymous. On the difference between earnings and comprehensive income, the Financial Accounting Standards Board (USA) in its SFAC No. 5 says:

“Earnings focus on what the entity has received or reasonably expects to receive for its output (revenues) and what is sacrificed to produce and distribute that output (expenses). Earnings also includes results of the entity’s incidental or peripheral transactions and some effects of other events and circumstances stemming from the environment (gains and losses).”

Arguments in Favour of Comprehensive Income

Many arguments have been advanced in support of measuring comprehensive income of a business firm:

- (i) An income statement that includes all income charges and credits recognised during the year is said to be easier to prepare and more easily understood by the readers. This is based on the assumption that accounting statements should be as verifiable as possible; several accountants working independently on the same figures should be able to arrive at identical income figures.
- (ii) The annual reported net incomes, when added together for the life of the enterprise, should be equal to the total net income of the enterprise.
- (iii) The distinction between operating and non-operating transactions influencing the income is not clear-cut. Transactions classified as operating by one firm may be classified as non-operating by another firm. Furthermore, items classified as non-operating in one year may be classified as operating by the same firm in a subsequent year. This in itself, leads to inconsistencies in making comparison among different firms or over several periods for the same firm.
- (iv) The omission of certain charges and gains from the computation of net income lends itself to possible manipulation or smoothing of the annual earning figures.
- (v) With adequate disclosure of items influencing the comprehensive income, the financial statements users is assumed to be more capable of making appropriate classification to arrive at an appropriate.

Advocates of the all-inclusive concept claim that reporting in the income statement of all items affecting the shareholder's interests during the period, other than dividends and other transactions between the enterprise and its shareholders,

provides more useful information for the users of financial statements to enable them to evaluate the importance of the items and their effects on operating results. Although the all inclusive concept is generally supported, there are circumstances in which it may be considered desirable to report certain items outside the income statement for the current period. However, unusual items are generally included in net income.

Components of Comprehensive Income

Comprehensive Income is a useful measure of overall performance. However, information about the components that make up overall performance is also needed. A single focus on the amount of comprehensive Income is likely to result in a limited understanding of enterprise performance; information about the components of comprehensive Income often may be more important than the total amount of comprehensive Income. Investors generally attach more importance to component parts of an enterprise's income for a period than knowing the aggregate figure shown on the "bottom line" for it is knowledge about the composition of the aggregate that makes judgment about the "quality earnings" possible. "Quality of earnings" generally refers to the durability and stability of earnings. For instance, one company may have Rs. 1,00,000 income, all derived from continuing and recurrent operations, another may have the same aggregate income derived from a one time gain on redemption of debt. Most investors would give more value to the first income figure than to the second income figure.

Although some generalizations can be made about components of income, the separate components will differ for different kinds of enterprises. The components of comprehensive Income usually consist of the following items:

- (1) Items that are unusual or that occur infrequently, but that do not qualify as "extraordinary items."
- (2) Results of transactions in investments in other enterprises.
- (3) Items that can be estimated with only little reliability.
- (4) Unrealised changes in the value of assets and liabilities, when these are recognised by the accounting model in use.
- (5) Exchange transactions and other transfers between enterprise and other entities that are not its owners.
- (6) Items relating to the payment or recovery of taxes.
- (7) Items relating to an entity's ongoing major or central operations.

The above list is not exhaustive. Among the above items, the "ongoing major or central operations" are generally the primary source of comprehensive income. It should be understood clearly that what are major or central operations for one kind of enterprise are peripheral or pr incidental for another, and for some it may be difficult to know where to draw the line. For most businesses, gains and losses on the sale of company automobiles are incidental; for a car rental company they are central. Transactions in marketable securities are incidental for a manufacturing business and central for an investment banker. Thus, what are revenues to one business enterprise are gains to another business enterprise. The various components of comprehensive Income may differ significantly from the another in terms of stability, risk and predictability, indicating a need for information about these components of income. Duff and Phelp's observe:

"In the practical world of business and investment, however, net income determined on all-inclusive basis contains too much "noise", i.e. earnings (positive or negative) derived from development outside the normal operations of the business, such as capital gains or accounting changes. These are generally non-recurring over a period of time, so that the analyst places his primary emphasis on earning power as something that can be counted on from year to year. Thus, earning power is a second concept of earnings and the one most meaningful to the investor."

PRIOR PERIOD ITEMS

Prior period items are generally infrequent in nature. They should not be confused with accounting estimates which are, by their nature, approximations that may need correction as additional information becomes known in subsequent periods. The charge or credit arising on the outcome of a contingency, which at the time of occurrence could not be estimated accurately, does not constitute the correction of an error but a change in estimate. Such an item is not treated as a prior period item.

EXTRAORDINARY ITEMS

Extraordinary items are sometimes termed "unusual items." Some examples of such items could be the sale of a significant part of the business, the sale of an investment not acquired with the intention of resale or a liability arising

on account of legislative changes or judicial pronouncement etc. The nature and amount of each extraordinary item are separately disclosed so that users of financial statements can evaluate the relative significance of such items and their effect on the operating results.

Income or expenses arising from the ordinary activities of the enterprises though abnormal in amount or infrequent in occurrence do not qualify as extraordinary. An example of such an item would be the write-off a very large receivable from a regular trade customer.

The 'comprehensive income' concept covers several, types of income which have varying degrees of significance for the investors. Sometimes it is suggested that a tripartite form of income statement should be prepared in which *operating income, holding gains/losses and extraordinary items would be separately reported. In this income statement format, the main advantage is the clear separation of operating earnings — earning power — from other types of income. This will be more useful to the investors, creditors and other users who are primarily concerned with earning power, than the one number, all-inclusive net income.*

TRANSACTIONS APPROACH TO INCOME MEASUREMENT

The transactions approach in income measurement records changes in asset and liability valuations only as these are the result of transactions. The term transactions is used in a wider sense and it includes both external transactions and internal transactions. As it can be inferred, external transactions relate to dealings with outside parties and internal transactions arise due to use or conversion of assets within the firm. Changes in values are not recognised if such changes are based on market valuations or expectations and changes therein. Income is recognised when new market valuations are more than the input (cost) valuations and when the external transactions take place. Internal transactions may have valuation changes, but only those that result from the use or conversion of assets are usually recognised and recorded. When conversion takes place, the value of the old asset is usually transferred to the new asset. Therefore, the transactions approach fulfils the concept of realization at the time of sale or exchange and cost concept recognised in accounting.

In transactions approach, income is determined after recording revenues and expenses associated with external transactions. It should be understood that revenues and expenses have their own problems of timing and valuation. However, the vital issue is of proper matching of expenses with the associated revenues during a definite period. Furthermore, the different concepts of net income based on different methods of determining capital maintenance can be considered in the transactions approach which will require adjustments to revenues and expenses at the time of recording each transaction and assets valuations at the end of each period. In fact, current accounting practice is a combination of capital maintenance concept of income, operational concept and the transactions-based approach to income measurement.

The transactions-based income measurement has some advantages. Firstly, it provides information about assets and liabilities existing at the end of a period. The availability of this information facilitates application of different asset valuation methods.

Secondly, the net income of a business can be classified in terms of products, customers which certainly provide more useful information to the management. Thirdly, income data can be collected for operations within the firm and external factors separately. Fourthly, different statements prepared under the transactions approach can be made to have linkage with each other. This enhances the fuller understanding and utility of data developed in this approach.

ACTIVITIES APPROACH TO INCOME MEASUREMENT

The activities approach focuses on description of activities of a business enterprise rather than on transactions (as in transactions approach). In activities approach, income is recognised when certain activities or events occur; income recognition is not confined to the mere result of specific transactions. A business firm does many activities such as planning, purchasing, producing, selling. Activity income is recognised at each of these activities. Practically speaking, activities approach are expansion of the transactions approach. The main difference between transactions approach and activities approach is that the former is based on the reporting process that measures an external event — the transaction — and the latter is based on the real-world concept of activity or event in a wider sense. Both approaches, however, fail to achieve realistic income measurement since both depend on same structural relationships and underlying concepts and both have no real-world counterpart.

Activities approach income facilitates the measurement of several concepts of income, which can be used for different purposes. It can be contended that income in case of production and sale of merchandise requires different valuations and predictions which may not be relevant while measuring income in case of purchase or sale of securities or holding assets for

mere capital gains. The availability of income components by different types of operations as activities is useful in measuring the efficiency of management and also in better predictions as different activities reflect different behavioral patterns.

RECIPIENTS OF NET INCOME

The term 'net income' generally means net earning or net profits accruing to current shareholders or owners of the business. However, there may be valid reasons for the presentation of a net income figure that represents net earnings to a narrower or broader group of recipients. There are listed as follows:

- (1) **Value-added concept of Income:** Broadly speaking, it is possible to view the enterprise as having a large group of claimants or interested parties, including not only owners and other investors but also employees and landlords of rented property. This is the value-added approach. Value added is the market price of the output of an enterprise less the price of the goods and services acquired by transfer from other firms. Thus, all employees, owners, creditors and governments (through taxation) are recipients of the enterprise income. This is the total price that can be divided among the various contributors of factor inputs to the enterprise in the production of goods and services. The value-added income would include wages, rent, interest, taxes, dividends paid to shareholders, and undistributed earnings of the companies.
- (2) **Enterprise Net Income:** This concept of net income has an advantage from the point of view of separating the financial aspects of an enterprise from its operating. The net income to the enterprise is an operating concept of net income. The operating concept of income has earlier been discussed in this chapter. Net income resulting under 'operating capability concept' is known as enterprise net income.
- (3) **Net Income to investors:** In accordance with the entity concept of the business enterprise, both shareholders and creditors of long-term debt are considered equally as investors of permanent capital. With the separation of ownership and control in the business enterprises, the differences between shareholders and debt holders are no longer as important as they once were. The main differences arise in the priorities of claims against income and against assets in liquidation.

In the entity concept, income to investors includes the interest on debt, dividends to preferred and common shareholders, and undivided remainder. This concept of income has considerable merit for several purposes: (1) The decisions regarding the sources of long-term capital are financial rather than operating matters. Therefore, the net income to investors reflects more clearly the results of operations. (2) Because of differing financial structure, comparisons among firms can be made more readily by using this concept of income. (3) The rate of return on total investment computed from this concept of income portrays the relative efficiency of invested capital better than does the rate of return to shareholders.

In the computation of net income to investors, income taxes are treated as expenses. Corporate income after taxes is much more stable — by industries — than income before taxes; income taxes seem to be passed on much as other expenses. Also, both investors and managers seem to make most of their decisions on the basis of income after taxes.

- (4) **Net Income to shareholders:** The most traditional and accepted viewpoint of net income is that it represent the return to the owners of the business. Although this concept has its firm foundation in the proprietary approach, many authors apply it to the entity approach and consider the accounting profit of the entity to be a liability to the owners. FASB Statement of Financial Accounting Concepts No. 1, emphasized the predictive nature of reported earnings. It states, for example, that in addition to being used to evaluate management's performance, reported earnings may be used to predict future earnings, to predict the long-term earning ability of the enterprise, or to evaluate the risks of investing in or lending to the enterprise.
- (5) **Net Income to residual equity holders:** In financial statements presented primarily for shareholders and investors, the net income available for distribution to common shareholders is usually thought to be the most important single figure in the statements. Net income per share of common share and dividends per share are the most commonly quoted figures in financial news, along with the market price per share. Therefore, there is pragmatic support for presenting statements from which the net income to residual equity holders can readily be obtained.

The holders of common stock and the prospective buyers of common shares are interested primarily in the future flow of dividends. Normally, only a part of the residual net income is distributed as dividends, but the knowledge of the net income available and the financial policy of the companies may provide useful information to common shareholders in their evaluation of the firm and in their prediction of the total amount of annual dividend distributions in the future. However, in order to predict the amount of dividends he may receive in the future, an investor must also predict the number of share that will be outstanding in each period.

Although it is possible to view current net income as the return to current outstanding shareholders, potential residual equity holders must be taken into consideration in predictions regarding future earnings and dividends per share. Furthermore, if current net income is not distributed to current shareholders, the amount added to retained earnings may be shared by these potential holders of common shares.

Examples: Based on the following information, prepare conventional income and value-added statement
(In thousand rupees)

Sale revenue	Rs.5,000
Material used	1,000
Salaries and Wages	900
Depreciation	400
Income Tax	800
Supplies used	200
Utilities expenses	300
Interest expense	200
Dividends paid	300

(M.Com., Delhi 1988)

Solution:

Conventional Income Statement

	<i>Rs. In thousand</i>	
Sales	5,000	
Less: Cost of goods sold		
Material	1,000	
Salaries	900	
Depreciation	400	
Supplies	200	
Utilities	300	
Interest	200	3,000
Net profit before tax and dividend		2,000
Less: Income tax	800	
Dividend paid	300	1,100
Profit retained		900

Value Added Statement*Rs. In thousand*

Sales		5,000
Less: Material	1,000	
Salaries	200	
Utilities	300	1,500
Value Added	3,500	
Distributed as :		
Salaries	900	
Income Tax	800	
Interest	200	
Dividend	300	
Depreciation	400	
Profit retained in business	900	
	3,500	

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CHAPTER-6

REVENUES, EXPENSES, GAINS AND LOSSES

REVENUES

Income determination in accounting is the process of identifying, measuring and relating revenues and expenses of a business enterprise for a accounting period. Revenues are inflows or other enhancements of assets of an enterprise or settlements of its liabilities (or a combination of both) during a period from delivering or producing goods, rendering services, or other activities that constitute the enterprise's on going major or central operations. Accounting Principles Board of U.S.A. has given the following definition of revenue:

"Revenue is gross increase in assets or gross decrease in assets or gross decrease in liabilities recognised and measured in conformity with generally accepted accounting principles that results from those types of profit directed activities of an enterprise that can change owner's equity."

The Accounting Standards Board of the Institute of Chartered Accountants of India defines revenue in the following manner

"Revenue is the gross inflow of cash, receivables or other consideration arising in the course of the ordinary activities of an enterprise from the sale of goods, from the rendering of services, and from the use by other of enterprise resources yielding interest, royalties and dividends. Revenue is measured by the charges made to customers or clients for goods supplied and services rendered to them and by the charges and rewards arising from the use of resources by them. In an agency relationship, the revenue is the amount of commission and not the gross inflow of cash, receivables or other consideration."

Under generally accepted accounting principles, the following receipts of the proceeds are not recognised as revenues.

- (a) Realized gains resulting from the disposal of, and unrealized gains resulting from the holding of non-current assets e.g. fixed assets;
- (b) Unrealized holding gains resulting from the change in value of current assets, and the natural increase in herds and agricultural and forest products;
- (c) Realized or unrealized gains resulting from changes in foreign exchange rates and adjustments arising on the translation of foreign currency financial statements;
- (d) Realized gains resulting from the discharge of an obligation at less than its carrying amount.
- (e) Unrealized gains resulting from the restatement of the carrying amount of an obligation.

Thus, revenue does not include all recognised increases in assets or decreases in liabilities. Receipts of the proceeds of a cash sale is revenue under present generally accepted accounting principles because the net result of the sale is a change in owners' equity. On the other hand, receipts of proceeds of a loan, investment by owners, or receipt of an asset purchased for cash are not revenue under present generally accepted accounting principles because owners' equity can not change at the time of the loan or purchase.

Revenue Related Activities

Revenue recognition is mainly concerned with the timing of recognition of revenue in the income statement of an enterprise. Before explaining the revenue recognition criteria, it may be appropriate to understand the operating cycle of a business enterprise, especially in a manufacturing concern. The following six critical events are generally found in the operating cycle of a manufacturing company.

- (1) Acquisition of resources
- (2) Receipts of customer orders
- (3) Production
- (4) Delivery of goods or performance of services
- (5) Collection of cash
- (6) Completion of all contractual obligations

It may be mentioned that each of the above critical events is a productive activity, that adds value in some measure to the goods or merchandise purchased. On these grounds, a portion of the ultimate sale price ought to be recognised as revenue as each activity is performed. The difficulty is that ultimate sale price is the joint product of all activities, and it is impossible to say with certainty how much is attributable to any one of them. For this reason, accounting select one event as the signal for revenue and expense recognition the others.

Revenues, in most cases are the joint result of many profit – directed activities (events) of an enterprise and revenue is often described as being earned gradually and continuously by the whole of enterprise activities. Earnings in this sense is a technical term that refers to the activities that gave rise to the revenue – purchasing, manufacturing, rendering service, delivering goods, the occurrence of an event specified in a contract and so forth. All of the profit – directed activities of an enterprise that comprise the process by which revenue is earned is, therefore, rightly called the earning process.

1. Sale of Goods
2. Rendering of Services
3. Use by others of enterprise resources yielding interest, royalties, fees and dividends
4. Instalment method
5. Money received or amounts paid in advance

1. Sale of Goods

A key criterion for determining when to recognise revenue from a transaction involving the sale of goods is that the seller has transferred the property in the goods to the buyer for a price. The transfer of property in goods, in most cases, results in or coincides with the transfer of significant risks and rewards of ownership to the buyer, there may be situations where transfer of property in goods does not coincide with the transfer of significant risks and rewards of ownership to the buyer. Such cases may arise where delivery has been delayed through the fault of either the buyer or the seller and the goods are at the risk of the party at fault as regards any loss which might not have occurred but for such fault. Further, sometimes the parties may agree that the risk will pass at a time different from the time when ownership passes.

At certain stages in specific industries, such as when agricultural crops have been harvested or mineral ores have been extracted, performance may be substantially complete prior to the execution of the transaction generating revenue. In such cases when sale is assured under forward contract or a government guarantee or where market exists and there is a negligible risk of failure to sell, the goods involved are often valued at net realisable value. Such amounts while not revenue, are sometimes recognised in the statement of profit and loss and appropriately described.

2. Rendering of services

Revenue from service transaction is usually recognised as the service is performed, either by the proportionate completion method or by the completed service contract method:

- (i) Proportionate or Percentage Completion method – This method has four basic characteristics:
 - (a) Costs are accumulated separately for each distinct work project, contract or job order; each of these may be referred to as a job.
 - (b) The ratio of the amount of work done on each job to the total amount of work required by that job is estimated at the end of each period.
 - (c) Revenue from each job is recognised in proportion on the job, as measured by the ratio of the work done to total work required.
 - (d) Job costs are recognised as expenses as revenues are recognised.

The percentage – completion method is most often used when the production cycle is long, the work is done under contracts with specific clients or customers, and adequate data on progress are available. The contracts provide a basis on which to estimate the amount of cash to be collected after all production work has been completed; if the progress percentage data are valid, they provide assurance that the work done to date will ultimately lead to the collection of cash. Since

the cost of the work done to date is readily measurable, the revenue – recognition criteria are satisfied at the time of production as long as reliable progress percentage data are available.

The percentage – completion method recognise net revenue (profit) prior to realization. It is sanctioned in order to permit the reporting of profit on a yearly basis by those entities involved in long – term construction projects. It is significant to note that the matching process normally entails first identifying revenues of a given period and then matching certain costs against them to obtain net income or profit. That is, revenues are identified as the independent variable and costs, the dependent. But the percentage- completion method reverses the procedure by identifying the costs incurred in a given period as the independent variable and then matching future revenue to them.

Income Effects of Percentage – Completion Method

Percentage – completion method has two effects. First, it leads to earlier recognition of revenue. Investors and external users may be informed more promptly of changes in volume of business activity or in the profit rate. Second, this method is likely to report a smoother income stream in long – cycle operations. Income smoothing is said to occur when a business enterprise selects from among acceptable alternative accounting methods to achieve income results that are relatively stable (i.e. smooth) over time.

(ii) **Completed Service Contract Method – Performance** consists of the execution of a single act. Alternatively, services are performed in more than a single act, and the services yet to be performed are so significant in relation to the transaction taken as a whole that performance cannot be deemed to have been completed until the execution of those acts. The completed service contract method is relevant to those patterns of performance and accordingly revenue is recognised when the sole or final act takes place and the service becomes chargeable. As an alternative to percentage – completion method, the completed contract method may be used to account for long – term construction projects. This method recognizes revenues upon final approval of the project by the customer, i.e. in effect at delivery. The completed contract method would be suitable for an entity engaged in many long – term projects some of which are completed each year. It should also be used in preference to the percentage – completion method in cases in which reasonable estimates of future costs can not be made.

3. Use by Other of Enterprise Resources Yielding Interest, Royalties and Dividends—

The use by other of such enterprise resources gives rise to:

- (i) Interest – charges for the use of cash resources or amounts due to the enterprise;
- (ii) Royalties – charges for the use of such assets as know – how, patents, trade marks and copyrights;
- (iii) Dividends – rewards from the holding of investments in shares.

Interest accrues, in most circumstances, on the time basis determined by the amount outstanding and the rate applicable. Usually, discount or premium on debt securities held is treated as though it were accruing over the period to maturity.

Royalties accrue in accordance with the terms of the relevant agreement and are usually recognised on the basis unless, having regard to the substance of the transactions, it is more appropriate to recognise revenue on some other systematic and rational basis.

Dividends from investments in shares are not recognised in the statement of profit and loss until a right to receive payment is established.

When interest, royalties and dividends from foreign countries require exchange permission and uncertainty in remittance is anticipated, revenue recognition may need to be postponed.

4. Instalment Method

An exception to the general rule that revenues are realized and recognised concurrently is the installment method. In this method, revenue realization (delivery) precedes revenue (profit) recognition. Recognition is delayed through the device of showing the gross profit on the installment sale as “deferred” in the balance sheet. It is afforded later recognition in the income statement proportionately to the collection of related receivable. In the cost – recovery variation of the installment method, no profit is recognised until cost has been recovered. Of all the revenue recognition alternatives, the cost – recovery one is the most conservative since it provides for the latest possible revenue recognition.

5. Money Received or Amounts Paid in Advance

Sometimes money is received or amounts are billed in advance of the delivery of goods or rendering of services i.e. before revenue is to be recognised, e.g., rents or amount of magazine subscriptions received in advance. Such items are rightly not treated as revenue of the period in which they are received but as revenue of the future period or periods in which they are 'earned'. These amounts are carried as 'unearned revenue' i.e. liabilities, until the earning process is complete. In the future periods when these amounts are recognised as revenues, it results in recording a decrease in a liability rather than an increase in an asset.

REVENUE RECOGNITION AND REALISATION PRINCIPLE

From the above discussion, it can be concluded that realisation principle primarily determines the question of revenue recognition. Revenue recognised under the realisation principle is recorded at the amount received or expected to be received. The realisation principle requires that revenue be earned before it is recorded. This requirement usually causes no problems because the earning process is usually complete or nearly complete by the time of the required exchange. Mcferland defends realisation principle in recognition of revenue:

"There are strong reasons why revenues reported in the summary income statement should be realised revenues... the concept of realised revenue is consistent with the uses made of the income statement by management and by investors. Since adherence to the realisation concept brings revenues into close conformity with the current inflow of disposable funds from sales, reported profits constitute a reliable measure of a company's ability to pay dividends, to retire debt, or to increase shareholder's equity and future profits by reinvesting earnings. The realisation concept also helps to avoid the possible disastrous consequences which may follow if financial obligations are undertaken in reliance on reported revenues which fail to materialize as disposable funds."

Realisation, however, cannot take place by the holding of assets or as a result of the production process alone. It is true that increases and decreases in asset values take place prior to sale. However, these are only contingent values since their ultimate validation depends on completion of the entire production and marketing cycle. Unrealised increases in assets values do not produce any disposable funds for reinvestment in the business or for paying debt and dividends. Consequently, the accountant regards historical cost inputs as invested capital and ordinarily does not recognise changing values until realisation has occurred. Moreover, the amounts of these unrealised increases can be supported only by circumstantial evidence drawn from transactions to which the company owning the assets is not a party. A wide area for subjective judgments exists in selecting pertinent transactions and the reliability of the measurements of unrealised revenues is likely to be too low to merit the confidence placed in external financial statements.

According to some writers, revenue realisation and revenue recognition. Although sometimes recorded concurrently, are distinct accounting phenomena and distinct occurrences. Revenue realisation occurs at the time of giving of goods or services by the entity in an exchange. Revenue recognition is the identifying of revenue to be admitted to a given year's income statement. Most often, revenue realisation and recognition occur contemporaneously and are recorded concurrently, i.e. in the same entry. However, in some specialised cases, it is possible for revenue recognition to precede or to follow revenue realisation. Hendriksen feels that much confusion prevails because of the realisation concept which seems to predate the critical events giving rise to income. Hendriksen, therefore, advises to abandon the term (realisation): "In its (realisation) place, emphasis should be placed on the reporting of valuation changes of all types, although the nature of the change and the reliability of the measurement should also be disclosed. Furthermore, accountants may be able to provide more relevant information to users of external reports if less emphasis is placed on the relationship revenue to net income and more emphasis on the informational content of the several measurements of revenue. For example, it is likely that several attributes of revenue—such as sales price of goods produced, goods and services sold, and the final amount of cash received for goods and services rendered—may be relevant to external users. Acceptance of one attribute should not necessarily exclude disclosure of other attributes."

The American Accounting Association's Committee on Concept and Standards has concluded that income should be reported as soon as the level of uncertainty has been reduced to a tolerable level. The committee observes:

"Realisation is not a determinant in the concept of income; it only serves as a guide in deciding when events otherwise resolved as being within the concept of income, can be entered in the accounting records in objectives terms; that is when the uncertainty has been reduced to an acceptable level."

EFFECTS OF UNCERTAINTIES ON REVENUE RECOGNITION

Revenue recognition inevitably falls short of its objective because of uncertainty and its effects on business and economic activities and their depiction and measurement. Uncertainty often clouds whether a particular event has occurred or what an event's effects on assets or liabilities or both may have been. Uncertainty refers to a quality or state in which something is not surely or certainly known and thus is, at least to some extent, questionable, problematical, or doubtful. In case of uncertainties, the following guidelines may be helpful in revenue recognition:

- (i) An essential criterion for the recognition of revenue is that the consideration receivable for the sale of goods, the rendering of services or from the use by others of enterprise resources is reasonably determinable. When such consideration is not determinable within reasonable limits, the recognition of revenue is postponed.
- (ii) When the uncertainty relating to collect ability arises subsequent to the time of sale or the rendering of the service, it is more appropriate to make a separate provision to reflect the uncertainty rather than to adjust the amount of revenue originally recorded.
- (iii) Where the ability to assess the ultimate collection with reasonable certainty is lacking at the time of raising any claim e.g., for escalation of price, export incentives, interest etc., revenue recognition is postponed. In such cases, it may be appropriate to recognise revenue only as cash is received. Where there is no uncertainty as to ultimate collection, revenue is recognised at the time of sale or rendering of service even though cash payments are made by instalments.
- (iv) Recognition of revenue requires that revenue is measurable and that at the time of the sale or the rendering of the service it would not be unreasonable to expect ultimate collection.

MEASUREMENT OF REVENUE

The amount of revenue arising on a transaction is usually determined by agreement between the parties involved in the transaction. Revenue is recorded (measured) at the amount received or expected to be received. When uncertainties exist regarding the determination of the amount, or its associated costs, these uncertainties may influence the timing of revenue recognition.

Under the present value of money concept revenue may mean the cash equivalent or the present discounted value of the money claims to be received subsequently from the revenue transaction. The present value of cash sales is equivalent to the amount of cash sales. For example, if cash sales are Rs. 1,000 the present value of this cash sales will also be Rs. 1,000. But if this amount is to be received after one year (not being a cash sale), payment of Rs. 1,000 after one year produce less than Rs. 1,000 at the time of initial transaction. Therefore Rs. 1,000 should be discounted for the waiting period. In case, waiting period is short, future cash flows need not to be discounted. If the waiting period is small, the discounted value and total revenue figure may not significantly differ.

EXPENSES

Like revenues, the determination of expenses is important in the computation of net income, which show the result of ongoing major or central operations during an accounting period. Expense, like 'revenues' is "a flow concept, representing the unfavourable changes in the resources of a firm. But not all unfavourable changes are expenses. More precisely defined, expenses are the using or consuming of goods and services in the process of obtaining revenues "

Under the asset/liability view, expenses are defined as "decreases in the assets or increases in liabilities arising from the use of economic resources and services during a given period... Under the revenue/expense view, expenses comprise all the expired costs that correspond to the revenues of the period."

The APB Statement No. 4 has defined expenses as "... gross decreases in assets or gross increases in liabilities recognized and measured in conformity with generally accepted accounting principles that result from those types of profit-directed activities of an enterprise that can change owners' equity." Most has raised three objections to this definition

1. The word 'gross'; what does it mean?
2. Any kind of decrease in assets or increase in liabilities can change owners' equity, even repayment of loan (gain or loss or retirement of debt).
3. As with revenues, definition of expenses in terms of changes in equity is less than helpful if equity itself is a residual

The FASB's definition of expenses is a usable one. It states that "expenses are outflows or other using up of assets, or incurrence of liabilities (or a combination of both) during a period from delivering or producing goods, rendering services or carrying out other activities that constitute the entity's ongoing major or central operations."

Some have objected to the absence of a reference to GAAP. It is felt that the reference is implicit in these definitions. The definition of expenses has been elaborated by describing the characteristics of expenses of business enterprises in para 81 of SFAC No. 6. 'Expenses represent actual or expected cash outflows (or the equivalent) that have occurred or will eventuate as a result of the enterprise's ongoing major or central operations during the period. The assets that flow out or are used or the liabilities that are incurred may be of various kinds — for example, unit of product delivered or produced, kilowatt hours of electricity used to light an office building, or taxes on current income. Similarly, the transactions and events from which expenses arise and the expenses themselves are in many forms and are called by various names — for example, cost of goods sold, cost of services provided, depreciation, interest, rent and salaries and wages—depending on the kinds of operations involved and the way expenses are recognized.'

We shall discuss below the following aspects relating to 'expenses':

1. the scope of term 'expense'
2. measurement of expenses
3. recognition of expenses
4. reporting of expenses

Scope of 'Expense'

In the FASB's definition of expenses, only unfavourable changes incurred in the process of obtaining revenues are included. The SFAC No. 6 has clearly distinguished between expenses and losses. Losses result from transactions or events that are peripheral or incidental to the operation of the enterprise. The expenses relate to ongoing major or central operations of the enterprise. "Only expenses can be matched with revenues of the period in the computation of 'net operation income' under the structural approach to income."

The 'all-inclusive' concept of income includes all expenses and losses recognized during the accounting period. The 1948 statement of AAA defined "expenses as consisting of both operating costs and losses", i.e., asset expirations or asset reductions not related to the process of providing goods or services to customers or clients were also classified as expenses. "On the other hand, the 'current operating concept' excludes from the computation of net income those expenses actually incurred in a prior period but not recognized until the current period, and all losses." But Hendriksen point out that this is a problem of choosing a meaningful concept of income rather than a problem of defining expenses.

Opinions differ on what should be included in expenses. Traditionally, sales returns and allowances are normally treated as offsets. But sales discounts and bad debt losses have been treated by accountants as expenses. Theoreticians, however, like them to be classified as offsets to revenue rather than as expenses. In their opinion, "sales discounts do not represent the use of goods and services." The discount, they plead, is "a reduction of the revenue and not a cost of borrowing funds." So also, "bad debt losses do not represent expirations of goods or services, but rather reductions of the amount to be received in exchange of the product." They also hold that "costs incurred in the sale of share capital are not expenses, but are reductions of the amount of capital received by the corporation." So also, "the write-off capital stock discount has no place in the income statement." Conventionally, however, most of these are treated as expenses for determination of income.

Measurement of Expenses

There are many concepts of income depending upon the objectives of measurement. Consequently, measurement of goods and services used in operations also depends upon the definition of objectives. "Those who define expenses as decreases in the net assets of the firm, a logical measurement is the value (exchange price) of the goods and services at the time they are used in operations of the enterprise... On the other hand, those who emphasize the reporting of cash flows of the enterprise usually suggest that expenses should be measured in terms of transactions to which the firm is a party and measured by the past, current or future cash expenditures." Generally, measurement of expenses is made on the basis of historical cost. But due to volatile changes in prices, replacement cost or current cash equivalents have also been proposed.

The primary reasons for still adhering to the conventional (historical cost) method of measuring expenses are that they are mostly verifiable and that they represent the cost of the goods and services at the time they were actually acquired by the firm. Careful distinction must be made between expenditure, payment, expenses, and cost.

“An expenditure is an outflow of assets, any resource, not just cash. A payment is an outflow of cash. An expense is a using up of a resource during a period. A cost is a sacrifice (including a using up) of a resource for a given purpose or object. “Basically cost is measured by the current value of the economic resources given up or to be given up in obtaining the goods and services to be used in operations”.

Though historical cost, being more verifiable, is preferred by accountants its relevance is suspect in times when the prices are not stable.

Current prices are recommended on the basis of the argument that “as revenue is usually measured in terms of current prices received for the product, the expenses matched against this revenue should also be measured in terms of the current prices of the goods or services used or consumed.” This view has the merit of correctly assessing the results of operations by the investors, creditors and other users. It separates income from holding gains.

There are two ways of obtaining current prices: (i) current liquidation (sale) price, and (ii) replacement cost. If there is a good market in which the item can be purchased and sold, the former may be relevant. The latter, however, may permit a more accurate prediction of the results of the activity of the firm in future since it represents the acquisition price at the time of use. However, if no market is available for the type of goods or services acquired, the replacement cost may not be verifiable, and there may be a lot of subjectivity in its estimation or valuation.

Recognition of Expenses

Expenses, generally speaking, should be recognized in the period in which the associated revenue is recognised. The SFAC No. 5 states that “expenses (and losses) are generally recognized when an entity’s economic benefits are used up in delivering or producing goods, rendering services, or other activities that constitute its ongoing major or central operations or when previously recognized assets are expected to provide reduced or no further benefits” (para 85).

Consumption of economic benefits during a period may be recognised either directly or by relating it to revenues recognised during the period:

1. Many expenses, such as selling and administrative salaries, are recognized during the period in which cash is spent or liabilities are incurred for goods and services that are used up either simultaneously with acquisition or soon after.
2. Some expenses, such as cost of goods sold, are matched with revenues—they are recognized upon recognition of revenues that results directly and jointly from the same transactions or other events as the expenses.
3. Some expenses, such as depreciation and insurance, are allocated by systematic and rational procedures to the periods during which the related assets are expected to provide benefits (para 86).

An expense (or loss) is recognized if it becomes evident that previously recognized future economic benefit of an asset have been reduced or eliminated, or that a liability has been incurred or increased, without associated economic benefits (para 87).

Reporting of Expenses

Reporting of expenses is related to recognition of expenses. By reporting, we can be inclusion of recognition of expenses in the financial statements.

The 1964 AAA Committee on the matching concept, defined matching as the process of reporting expenses on the basis of cause-and-effect relationship with reported revenues.”

The cash flow concept of income emphasizes that expenses should be reported as close to the actual cash expenditure as it reasonable. Under the accrual basis of accounting, all expenses, whether paid or unpaid, i.e., which have been incurred in earning revenues during a period, should be reported.

“A classification of expenses that might be useful to investors and others in making predictions or in evaluation current management decisions would be one that describes the behavioural nature of the expenses. That is, expenses

should be classified and described according to whether they are variable or fixed in nature with respect to production or sales volume, or whether they vary with respect to some other factor.”

GAINS AND LOSSES

Gains are defined as increase in net assets other than from revenues or from changes in capital. Gains are increases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period except those that result from revenues or investment by owners. Losses are decreases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity during a period except those that result from expenses or distribution to owners. Gains and losses represent favourable and unfavourable events not directly related to the normal revenue producing activities of the enterprise. Revenue and expenses from other than sales of products, merchandise, or service, such as disposition of assets may be separated from other revenue and expenses and the net effects disclosed as gains or losses. Other examples of gains and losses are sizeable write-downs of inventories, receivables, and capitalized research gains and losses on sale of temporary investments, and gains and losses on foreign currency devaluations.

Features of Gains and Losses

Gains and losses possess the following characteristics:

1. Gains and losses result from enterprises incidental transactions and from other events and circumstances stemming from the environment that may be largely beyond the control of individual enterprises and their managements. Thus, gains and losses are not all alike. They are of different types, even in a single enterprise.
2. Gains and losses may be described or classified according to sources. Some gains and losses are net results of comparing the proceeds and sacrifices (costs) in incidental transactions with other entities – for example, from sales of investments in marketable securities, from disposition of used equipment, or from settlement of liabilities at other than their carrying amounts. Other gains or losses result from non-reciprocal transfers between an enterprise and other entities that are not its owners-for example, from gifts or donations, from winning a lawsuit, from thefts, and from assessments of fines or damages by courts. Still other gains/losses result from holding assets or liabilities while their value changes-for example, from price changes that cause inventory items to be written down from cost to market, from changes in market prices of investments in marketable equity securities accounted for at market values or at the lower of cost and market, and from changes in foreign exchange rates. And still other gains or losses result from other environmental factors, such as natural catastrophes (for example, damage to or destruction of property by earthquake or flood), technological changes (for example, obsolescence).
3. Gains and losses may also be described as operating or non operating depending on their relation to an enterprise's earning process. For example, losses on writing down inventory from cost to market are usually considered to be operating losses, while losses from disposing of segments of enterprises are usually considered non operating losses.

Other descriptions or classifications of gains and losses, are also possible. A primary purpose for describing or classifying gains and losses and for distinguishing them from revenues and expenses associated with normal revenue-producing activities is to make displays of information about an enterprise's performance as useful as possible.

Recognition of Gains and Losses

The realization principle is more strictly followed in recognition of gains and losses. Gains are not generally recognised until an exchange or sale has taken place. However, an increase in the market value of securities may, under some circumstances, be sufficient evidence to recognise a gain. However, some persons oppose recognizing appreciation in value due to two reasons: (a) Increase in value is uncertain (b) An increase in value does not generate liquid resources that can be used for payment of dividends. The emphasis on liquid resources and cash flows, although useful for decision making purposes, may not be relevant for income measurement purposes. Relative certainty and verifiability of measurements are satisfactory guides for income measurement purposes. For investments in marketable securities, the recognition of gains and losses arising from material changes in market prices is being accepted in accounting although no sale or exchange might have taken place. However, change in value of land is generally not recorded in accounting.

The criteria for recognition of losses are similar to the criteria for the recognition of period expenses. Losses cannot be matched with revenue, so they should be recorded in the period in which it becomes fairly definite that a given asset will provide less benefit to the firm than indicated by the recorded valuation. In the case of sale of an asset or loss by fire or other catastrophe, the timing of the events is fairly definite. If an asset has lost its usefulness, the loss should be recognised and the final disposition should not be waited for. Loss arising should not be carried forward to future periods. If it is fairly definite and if the amount of the loss can be measured reasonably well, it should be recorded as soon as it is ascertainable."

RECOGNISING UNREALISED HOLDING GAINS AND LOSSES

As stated earlier, gains are generally not recognised until sale or exchange has taken place. However, during recent years, a large number of writers have expressed the opinion that the usefulness of financial statements would be enhanced by recognising unrealised gains or losses which arise while assets are being held. These writers advocate reporting fixed assets and inventories of materials and unfinished products at current replacement costs and finished products ready for sale at realisable market prices rather than at historical acquisition costs.

Such proposals are concerned with changes in values of individual assets rather than with changes in the purchasing power of money which is reflected in the general price level. Replacement costs are measured by appraising individual assets (perhaps with the aid of price indexes for specific classes of assets), while the general price level is measured by a general price index for all commodities and services.

Edwards and Bell have presented the most comprehensive theoretical case for replacement costs. They argue:

"... Accounting data must provide separately period by period, (1) an accurate measure of profit on operations and (2) an accurate measure of realizable gains which accrue as a result of holding assets which have risen in price. These are the key elements of information needed for evaluation by management of its own activities. To provide such information is the principal function of accounting... such data also provide the information necessary... for measuring the performance of individual firms by outsiders. Still further, the data, when aggregated, yield the information needed for input-output and national income accounts which serve to measure the performance of the economy as a whole."

In support of replacement costs, Edwards and Bell have listed the following defects of profits based on historical costs.

1. Gains achieved by buying assets when prices were low are confused with gains from using assets in operations. Holding gains may mask operating inefficiency or the market may place too high a price on shares of a company which will eventually be faced with the necessity for replacing low cost assets with never ones at higher prices. These important disadvantages can be avoided by putting all costs on a current basis.
2. Revenues and costs are mismatched because holding gains are reported only when sales occur rather than when replacement costs rise.
3. Where replacement costs have risen during an accounting period, the unrealized portion of these gains is not recorded by present reporting methods. This is considered objectionable for the following reason.

"In effect, present accounting data are predicated on the assumption that holding activities do not represent a purposeful means by which management can enhance the market position of the firm. To the extent that the firm attempts to make gains in this fashion, traditional accounting data fail to inform management, owners, and outsiders so to the progress the firm has made during the current period."

4. Inter company comparisons of balance sheets are hampered because assets have been acquired at different times and prices. To state all assets at current replacement costs would remove this bar to comparability.

For tax purpose, Edwards and Bell advocate determining the portion of holding gains actually realised through sales and apparent gains which result from the decline in the purchasing power of money. Unrealised gains presumably would be non-taxable. Under the accounting procedures, assets would be stated at current replacement costs. The difference between historical costs and current replacement costs of inputs measures the gain/loss from holding assets through time. When sales take place, the margin between replacement cost and selling price would measure profit on operations. The income statement would present both realised profit based on historical cost of sales (divided between profit on operations and realised holding gains) and unrealised holding gains based on valuing

assets at replacement costs. The balance sheet would show both historical and current replacement costs, with reconciliation through an unrealised surplus item.

The American Accounting Association's Committee on Concepts and Standards Long-Lived Assets has advocated calculation of periodic depreciation charges on replacement costs of assets:

"Income from ordinary operations is important to investors in making investment decisions. This amount, when compared with cash dividends, is relevant to an appraisal of the intent of the management to contract or expand the operating capacity of the firm. Secondly, it facilitates prediction of future income from ordinary operations, assuming that costs other than depreciation are also stated in current terms. Third, inter firm income comparability is improved by universal measurement of depreciation on the basis of current cost. Finally, in so far as depreciation represents a reduction in the stock of stock of assets for which management is responsible, this reduction is more clearly indicated by current-cost depreciation on all assets than by depreciation based on unmodified historical cost."

Supporters of current replacement costs generally advocate replacement cost rather than opportunity cost. The principal reason is that replacement costs are more realistic because a going concern will replace its assets at some time while disposal value implies liquidation, often normal prices for assets which have high value in use. However, goods held for sale do have meaningful net realization values and some writers advocate stating finished goods inventory at expected selling price less costs of disposal.

A U.S. study has found that security analysts and bankers oppose recognition of income before a sale takes place and do not believe that recognition of unrealised holding gains would produce more meaningful or useful income reporting for the making of investment decisions. The study gives the following reasons for the opposition to the suggestion that unrealised gains be reported in the income statement:

1. Inter company comparisons would be substantially improved by stating all costs in current terms, may prove an illusion. It is pointed out that companies have acquired assets at different times and different costs does not necessarily mean that product costs are significantly different. To be competitive, a company which has acquired its assets recently finds ways to compensate for the higher asset costs. Often newer equipment is more efficient than older equipment which cost less. Impact, technological changes are usually much more important than price changes. Moreover price changes can not be separated from technological changes. In many instances, the difference between replacement and acquisition costs would not be significant today because, as a result of expansion and modernization, much industrial equipment in use has been purchased at near current prices. Rapid turnover of inventories and widespread use of LIFO where prices are rising was thought to reduce the significance of any difference between replacement and acquisition costs in so far as current income is concerned.
2. Proponents of current costs view as a major benefit the separation of gains/losses attributable to holding assets. However, holding and using assets are not separable functions and consequently no purpose is served by imputing gains to holding as opposed to using. A company must maintain a planned capacity to do business and a significant portion of the inventory remains fairly constant. Replacement costs are important information for some types of management decisions but the data are not derived from historical financial reports.
3. Another reason for opposing current costs was the belief that feasible techniques for implementing the concept of current costs are not available. A variety of alternatives are encountered in determining replacement costs. Thus it is necessary to describe what is to be costed (e.g. an asset identical to that now owned, one which will give equivalent services, one which the company would buy it were to replace now), in what units it is to be priced (e.g. piecemeal replacement or purchase of a plant as a whole), and in what market quotations should be sought. These questions may be readily answerable for standard raw materials but require highly questionable decisions while pricing specialized equipment which often has no market and will rarely be replaced in kind. Sales realization from finished products is also an estimate subject to wide ranges of uncertainty in many cases.
4. Those who advocate current costs believe that matching of costs and revenues is improved by stating costs in current terms. However, it could prove serious damage to investors and creditors. In the first place, revenues reported by writing up assets may not be validated by subsequent transactions. Prices received for a firm's output do not always move at the same time or in the same direction for a firm's output do not always move at the same time or in the same direction as prices of input factors. Also market price movements may be reversed before goods are sold.

In the second place, decisions based upon the income statement are concerned with liquid funds. Directors and managers are guided by reported profits in making decisions to pay dividends and to expand. Creditors regard profits as an important indicator of financial strength and equity investors look to profits as the source of dividends and growth in value of their shares. All of these uses implicitly assume that reported revenues are closely matched by inflows of disposable liquid funds. Currently accepted financial reporting practice meets this test because it recognises revenues only when they are realised. If the unrealised increase in asset recognises revenues only when they are realised. If the unrealised increase in asset values fails to materialize as an inflow of funds, investors' forecasts of dividends and growth will not materialize. Penalties for overstating profit may be much greater than for understatement.

The above problems would lead to difficulties in establishing the credibility and reliability for asset costs and income on a current cost basis.

Revenues, Expenses, Gains, and Losses — A comparison

The following points of differences are found with regard to revenues, expenses, gains and losses.

1. Revenues and expenses are normally displayed "gross", while gains and losses are normally displayed "net". For example, sales by a furniture manufacturer to furniture jobbers usually result in displays in financial statements of both the inflow and outflows aspects of the transactions—that is, both revenues and expenses are displayed. Revenues are a "gross" amount reflecting actual or expected cash receipts from the sales. Expenses are also a "gross" amount reflecting actual or expected cash outlays to make or buy the assets sold. The expenses may then be deducted from the revenues to display a 'net' amount often called gross margin or gross profit on sales of product or output. If, however, a pharmaceutical company or a theatre sells furniture, it normally displays only the 'net' gain or loss. That is, it deducts the carrying amount of the furniture sold from the net proceeds of the sale before displaying the effects of the transaction and normally displays only the 'net' gain or loss from sale of capital assets.
 Except for possible tax effects, some gains have no negative aspects, and some losses have no positive aspects. For example, a gift may be received without a cost, or an uninsured building may be damaged or destroyed by fire or flood with no proceeds. These gains and losses are net in the sense that they show the end result of the transaction or event rather than only its positive or negative aspects—no further deductions are needed to obtain the net effect, except perhaps for a tax effect if the gain or loss is not "net of taxes".
2. Some gains and losses may be considered operating gains and losses and may be closely related to revenue and expenses. Revenues and expenses are commonly displayed as gross inflows or outflows of net assets, while gains and losses are usually displayed as net inflows or outflows.
3. Revenues and gains are similar in several ways, but some differences are significant, especially in displaying information about an enterprise's performance. Revenues and expenses provide different kinds of information from gains and losses, or at least information with a different emphasis. Revenues and expenses result from an enterprise's ongoing major or central operations and activities that constitute an enterprise's earning process—that is, from activities such as producing or delivering goods, rendering services, lending, insuring, investing and financing. In contrast, gains and losses result from incidental or peripheral transactions of an enterprise with other entities and from other events and circumstances affecting it.
4. It is generally deemed useful or necessary to display both inflows and outflows aspects (revenue and expenses) of the transactions and activities that constitute an enterprise's ongoing major or central earning process. In contrast, it is generally considered adequate to display only the net results (gains or losses) of incidental or peripheral transactions or of the effects of other events or circumstances affecting an enterprises, although some details may be disclosed in financial statement, in notes, or outside the financial statements. Since a primary purpose of distinguishing gains and losses from revenues and expenses is to make displays of information about an enterprise's sources of comprehensive income as useful as possible, fine distinctions between revenues and gains and between expenses and losses are principally matters of meaningful reporting.
5. Distinctions between revenues and gains and between expenses and losses in a particular enterprise depend to a significant extent on the nature of the enterprise, its operations, and its other activities. Items that are revenues for one kind of enterprise are gains for another, and items that are expenses for one kind of enterprises are losses for another. For example, investments in securities that may be sources of revenues and expenses for insurance or investment companies may be sources of gains and losses in manufacturing or merchandising firms. Sales of furniture result in revenues and expenses for a furniture manufacturer, a furniture jobber, or a

retail furniture store, which are selling products or inventories, but usually result in gains or losses for an automobile manufacturer, a bank, a pharmaceutical company, or a theatre, which are selling part of their facilities.

Technological changes may be sources of gains or losses to most kinds of enterprises but may be characteristic of the operations of high technology or research-oriented enterprises. Events such as commodity price changes and foreign exchange rate changes that occur while assets are being used or produced or liabilities are owed may directly or indirectly affect the amount of revenues or expenses for most enterprises, but they are sources of revenues or expenses only for enterprises for which trading in foreign exchange or investing in securities is a major or central activity.

RECOGNITION OF AN ITEM IN FINANCIAL STATEMENTS

The term 'recognition' has been earlier explained in relation to revenues, expenses, gains and losses. An item to be recognised in financial statements, according to Financial Accounting Standards Board (USA) should meet the following two criteria:

1. The item meets the definition of element of financial statements. The FASB recognises the following as elements of financial statements: assets, liabilities, equity, investment by owners, distribution to owners, comprehensive income, revenues, expense, changes in net assets (applicable to non-business organization), gains and losses.
2. The item has a relevant attribute that can be measured with sufficient reliability. The FASB uses the term 'attribute' to describe the trait or aspect of a financial statement element that is to be measured. In constructing its conceptual framework the FASB has considered five possible attributes that might be used to represent assets and liabilities in a balance sheet:
 - (a) Historical cost/historical proceeds
 - (b) Current cost/current proceeds
 - (c) Current market value
 - (d) Net realisable value
 - (e) Net present value of expected cash flows.

It has to be decided whether the most relevant attribute for investment and other economic decisions is its costs to its present owner or some other attribute, such as its current sale value or what it would currently cost to buy. The choice of an attribute is very important for it is not only the representation of financial position in the balance sheet that is influenced. In fact, measurement of assets and liabilities also enters into the measurement of revenues, expenses, gains and losses, and most important earnings and other income concepts. Thus, every important item in the financial statement is affected.

The above criteria are to be applied with due regard to a pervasive cost-benefit constraint and a materiality threshold. It is not necessary to recognise an item if the costs of providing and using the information about it exceed the benefits or if it is immaterial in amount.

CONCLUSION

Income measurement requires that different components of income, especially revenues, expenses, gains and losses should be properly defined. Recognising these items has been an important problem in accounting as they influence evaluations and predictions of the activities and future cash/dividend distribution or other consideration arising in the course of the ordinary activities of an enterprise from the sale of goods, from the rendering of services, and from the use by others of enterprise resources yielding interest, royalties and dividends. Revenues recognition is mainly concerned with timing of recognition of revenue in the statement of profit and loss of an enterprise. Revenue recognition is guided by many principles including the important realization principle.

Expenses are essentially costs which are incurred in the process of obtaining revenues through the using or consuming of goods and services. Expenses in accounting are recognised on the principle of matching process, systematic and rational allocation of cost. Gains and losses emerge from peripheral or incidental transactions of an entity and not from revenue producing activities. Gains and losses may also be operating or non-operating depending on their relation to an enterprise's earning process. Realisation principle is more strictly followed in recognition of gains and losses, although some writers have recently advocated for the recognition of unrealised holding gains and losses also.

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3. Walter B. Meferland, *Concepts for Management Accounting*, New York, *NAA*, 1966, p.148.
4. The Institute of Chartered Accountant of India, AS-9, Revenue Recognition, New Delhi, *ICAI*, 1986, para 4.1
5. American Accounting Association's Committee on Concepts and Standards - External Reporting, *The Accounting Review Supplement*, 1974, p.209.

CHAPTER-7

VALUATION OF ASSETS

According to Section 211 of the Companies Act 1956 Financial Statements must give a 'true and fair view' of the state of affairs of the company. The replacement of the words "true and fair" in the Companies Act of 1956 for the words "true and correct" in the earlier Companies Act has been done with the intention that the figures given in the financial statements are not only arithmetically accurate, but they disclose the correct financial position of the business as suggested by the accounting principles. In other words, all matters which affect the financial position of the business have to be disclosed. No secret reserves are to be created. The assets and liabilities have to be properly valued so that the Balance Sheet discloses the true and fair financial position of the business.

The present chapter deals with the different principles involved in the valuation of different types of assets.

NATURE OF ASSETS

It will be quite relevant here to understand the basic meaning and nature of the term "assets" before proceeding further, since this will help in understanding the characteristics that are common to all assets. Several attempts have been made in this direction. One of the first attempts was made by Canning. He defined the term "asset" as follows :

"An asset is any future service in money or any future service convertible into money (except those services arising from contracts the two sides of which are proportionately unperformed) the beneficial interest in which is legally or equitably secured to some person or set of persons. Such a service is an asset only to that person or set of persons to whom it runs."

The definition given by Accounting Principles Board Statement No.4 (APBS No. 4) makes the meaning of the term "assets" more clear. According to the Board, the term "assets" refers to "economic resources of an enterprise that are recognised and measured in conformity with generally accepted accounting principles including certain deferred charges."¹ This definition lays emphasis on the amount carried forward in a Trial Balance with the main objective of computation of the periodic income.

The Financial Accounting Standard Board, U.S.A. in its Statement of Financial Accounting Concepts No. 3 (SFAC No. 3) defines the term "assets" as follows :

"Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events."

According to the Institute of Chartered Accountants of India, the term assets refers to "tangible objects or intangible rights owned by an enterprise and carrying probable future benefits."³

On the basis of the above definitions, the following can be termed as the basic characteristics to constitute any resource as an asset;

- (i) The economic benefits must be the result of past transactions or events. Assets do not include benefits that will arise in the future but that do not exist or are not under the control of the business."
- (ii) The rights must accrue to a specific individual or firm e.g., the right to benefit from driving on public highway cannot be treated as an asset for the individual or the firm.
- (iii) There must exist some specific right to future benefits or service potentials. Rights and services that are expired cannot be termed as assets. Moreover, the rights must have a positive benefit. Rights with zero or negative potential benefits are not assets. For example, if a building has lost its service value and its cost of removal is exactly equal to the salvage value of the materials, the building cannot be treated as an asset.
- (iv) There must be legally enforceable claim to the right or services or some other evidence that the receipt of the future benefits is probable. Services that can be withdrawn at will by some other firm or individual or by the government without compensation should not be included as assets.

In brief "assets" may be defined as a resource of some value acquired at a specific monetary cost by an enterprise for carrying on its business operations.

CLASSIFICATION OF ASSETS

For valuation purposes, assets can be classified in the following categories:

¹Canning John B. "The Economics of Accountancy"(New York Renold Press—1929) p. 22.

- (1) Fixed Assets,
- (2) Current or Floating or Circulating Assets,
- (3) Wasting Assets,
- (4) Intangible Assets,
- (5) Investments.

In the following pages the principles regarding valuation of each of the above categories of assets are being discussed in detail.

Valuation of Fixed Assets

Nature These are assets held with the intention of being used on continuous basis for the purpose of producing or providing goods or services and are not held for resale in the normal course of business.¹ Thus, the following are the characteristics of Fixed Assets :

- (i) They are acquired for relatively long period for carrying on business of the enterprise.
- (ii) They are not intended for resale in the ordinary course of business.

Following are examples of the assets which fall in this category: Land, Building, Plant and Machinery, Furniture and Fittings, Motor Vans, etc.

Mode of valuation While valuing the fixed assets, the following accounting concepts are important :

- (i) The fixed assets are meant for carrying on the operations of the business either by way of manufacturing the products or generating supporting services e.g., for transporting employees or goods or products purchased or sold by the company. They are not meant for resale and hence while valuing them the "going concern" concept of accounting is quite relevant. According to this concept it is assumed that the business will continue for a fairly long time to come. There is neither the intention nor the necessity to liquidate the particular business venture in the foreseeable future. Since the fixed assets are not meant for resale and hence it will be appropriate to value the assets at cost rather than their estimated realizable value in the event of the liquidation of the business.
- (ii) A closely related accounting concept to the "going concern" concept is the "cost concept" of accounting. According to this concept, an asset is ordinarily entered in the accounting records at the price paid to acquire it and this cost is the basis for all accounting for the same. On account of this concept the fixed asset should be valued at cost and subsequent increase or decrease in their market values should not be taken into account. The only exception to the statement is the diminution in the value of the fixed asset on account of depreciation. Thus, the fixed assets are to be shown at cost less appropriate depreciation. The 'cost concept' has the advantage of bringing objectivity in accounting. In the absence of this concept the valuation of the fixed assets would have been influenced by the personal bias or judgment of the accountant causing distortions in the financial statements of the firm.

The cost of the fixed asset comprises its purchase price and any attributable cost of bringing the asset to its working condition for its intended use. Financing cost relating to deferred credits or to borrowed funds attributable to construction or acquisition of fixed assets for the period upto the completion of construction or acquisition of fixed assets should also be included in the cost of the asset to which they relate. However, the financing cost (including interest) of fixed assets purchased on a deferred credit basis or on money borrowed for construction or acquisition of fixed assets should not be capitalised to the extent that such costs relate to periods after such assets are ready to be put to use.

The cost of a constructed fixed asset should comprise those costs that relate directly to the specific asset and those that are attributable to the construction activity in general and can be allocated to the specific asset.

When a fixed asset is acquired in exchange or in part exchange of other asset, the cost of the asset acquired should be recorded either at fair market value or the net book value of the asset given up, adjusted for any balancing payment or receipt of cash or other consideration.

¹ "Basic Concepts and Accounting Principles underlying Financial Statements of Business Enterprise" (AICPA 1970-p.49).

² AICPA Professional Accounting Standards, para 1230.019.

³ "Guidance Note on Terms used in Financial Statements" ICAI, p. 8.

⁴ Hendriksen E.S. "Accounting Theory"—4th Edition p. 251.

The valuation of fixed assets at cost and charging depreciation on cost basis creates problem for replacement of the assets under inflationary conditions. As a matter of fact, on account of continued inflationary tendencies, the preparation of the financial statements on the basis of historical cost has become largely irrelevant for judging the financial position of the business. As a result, there has been a growing demand by the accountants all over the world that the fixed assets should be valued at their current replacement price and depreciation be also charged in respect of them accordingly. Several studies have been made in this direction and the Institute of Cost and Management Accountants, London, the Institute of Chartered Accountants of India, etc., have made suitable suggestions. They have advocated for the adoption of current accounting method as contained in the Statement of Standard Accounting Practice 16 (SSAP 16) issued by the Accounting Committee of U.K. However, this standard has also raised a lot of controversies. It is yet to be given recognition by the Government for presentation of accounts by the corporate bodies. As such the 'cost concept' of accounting still holds good for valuation of fixed assets.

Valuation of Fixed Assets in Special Cases

- (i) Where an enterprise owns fixed assets jointly with others (otherwise than as a partner in a firm) the extent of its share in such assets, and the proportion in the original cost, accumulated depreciation and written down value should be stated in the balance sheet. Alternatively, *the pro rata* cost of such jointly owned assets should be grouped together with similar fully owned assets. Details of such jointly owned assets should be indicated separately in the fixed assets register.
- (ii) In the case of fixed assets acquired on hire purchase terms, although legal ownership does not vest in the enterprise, such assets should be recorded at their cash value, which if not readily available, should be calculated by assuming an appropriate rate of interest. They should be shown in the balance sheet with an appropriate narration to indicate that the enterprise does not have full ownership thereof.
- (iii) Where several assets are purchased for a consolidated price, the consideration should be apportioned to the various assets on a fair basis as determined by competent valuers.

In brief, it may be said that the Fixed Assets have to be valued at cost less the reasonable depreciation written off. It may however, be noted that no depreciation is to be charged in respect on land since the price of land generally appreciates and does not depreciate with the passage of time. The market values of the fixed assets are not relevant for valuation purposes till the business is a 'going concern'. Of course, in the event of possible liquidation of the business it will be appropriate to value the fixed assets at their market values rather than the values as shown by the books of account.

Valuation of Current Assets

Nature The term "Current Assets" refer to assets which have been acquired with the intention of converting them into cash during normal operating cycle of the business. Thus, the basic difference between current assets and fixed assets is that the current assets are held essentially for a short-period with the intention of converting them into cash while the fixed assets are essentially held for a long period without any intention of converting them into cash during the normal course of business. The term 'current assets' has been best defined by Grady in the following words

"For accounting purpose, the term "Current Assets" is used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business."¹

The board categories of Current Assets thus include :

1. Cash including fixed deposits with banks.
2. Accounts Receivable, *i.e.*, Debtors and Bills Receivable.
3. Inventory which includes stocks of :
 - (a) finished goods,
 - (b) stores and spare parts,
 - (c) raw materials,
 - (d) work-in-progress,

¹ Accounting Standard 10 "Accounting For Fixed Assets."

- (e) advances recoverable, e.g., advances deposited with Government or Public Authorities, viz., Customs, Port Authority, Income Tax Authorities, etc., and
- (f) pre-paid expenses, i.e., cost of unexpired services which have been paid for in advance.

Mode of valuation Since the current assets are meant for converting into cash during the normal operating cycle of business, hence they are valued on the principle of "cost or market price whichever is less." This principle is based on the fundamental accounting convention of conservatism. According to this convention, while valuing the current assets the accountant has to follow the policy of playing safe, i.e., "anticipate no profit, but provide for all possible Losses". Adoption of such a policy results in making the financial position of business stronger than what is depicted by the financial statements. This policy saves business from unnecessary financial hardships and legal complications which might have been caused due to non-accrual of the anticipated profits which the business might have taken into account.

The important principles involved in the valuation of specific assets are being given below :

- (i) **Accounts receivable.** The accounts receivables, i.e., debtors and bills receivables, should be valued at their realizable value. Realizable value of the receivables can be ascertained by deducting the bad debts written off and provision made for possible doubtful debts from the actual amount due. In case of foreign receivables the valuation may be made in terms of the domestic equivalent at the balance sheet date.
- (ii) **Cash and bank balance.** There is no basic problem involved in the valuation of cash since it has a fixed face value irrespective of its purchasing power besides its ability to discharge liability of an equal amount. Hence, the only principle involved in the valuation of cash is to physically count the cash at the disposal of the business and express it in terms of its face value. However, adequate provision may be made for the possibility of demonetisation of currency of a particular denomination by the Government.
As regards valuation of balance at bank, it will be appropriate to obtain a certificate from the bank in respect of the balance which the business with the bank. Such balance may be reconciled with the balance as shown by the Cash Book by preparing a Reconciliation Statement. The loss on account of possible failure of the bank (such possibility is almost negligible in India on account of nationalisation of large commercial banks and strict control of Government and the Reserve Bank), should be considered. Similarly, in case cash balance is being held in a foreign currency, it should be expressed in terms of the domestic equivalent at the balance sheet date.
- (iii) **Inventories.** As explained earlier, the term 'inventories' includes merchandise destined for sale in the normal course of business and materials and supplies to be used in the process of production for sale. Valuation of inventory is done on the basis of "cost or market price whichever is less."

Valuation of Wasting Assets

The term 'wasting assets' includes all natural resources that are subject to exhaustion through extraction. The principal types of wasting assets are as follows: (a) mineral deposits, (b) oil and gas deposits, (c) standing timber, etc.

The wasting assets are of the nature of large scale long-term inventories acquired for piece meal resale or physical use in production over a number of years. The cost of acquiring and developing wasting assets is transformed into periodic charges (popularly known as depletion) against revenue.

The wasting assets are also of the nature of fixed assets. However, there is a distinction between the decrease in the value of fixed assets and a wasting asset. In the case of the former the decrease in its value is due to wear and tear or obsolescence. While in case of the latter, it is due to operation of extracting a part of it and selling it out or due to exhaustion.

It is really very difficult to determine the extent to which a wasting assets is exhausted. Only a rough estimate can be made about the extent of its exhaustion. The wasting asset is therefore valued at its cost less the amount of depletion based on the estimated exhaustion of or extraction from such asset.

Valuation of Intangible Assets

Nature There are assets which have no physical existence. According to Kohler, an intangible asset is "A capital asset having no physical existence, its value being dependent on the rights that possession confers upon the owner."¹

¹ Paul Grady "Inventory of Generally Accepted Accounting Principles for Business Enterprises" pp. 243,235, New Research Study No. 7, AICPA, New York.

The purpose of defining an intangible asset as capital asset is simply to distinguish it from current asset. Otherwise assets such as, prepaid expenses, cheques paid in advance would have also come within the definition of the term "intangible asset." Thus, the characteristics of the intangible asset can be put as follows :

- (i) These assets are expected to benefit the firm beyond the current operating cycle of the business. The invested capital represented by the asset will be available for reinvestment only gradually over several or many years.
- (ii) There is a high degree of uncertainty regarding the value of the future benefits that are going to accrue on account of such assets. The possible value may range from zero to very huge amount. Some intangible assets relate to the development and manufacture of the product and others relate to the creation and maintenance of the demand for the product. Patents and copy rights reflect primarily the former while trade marks and trade names reflect primarily the latter. Goodwill may represent either or both. All, however, represent benefits that are highly uncertain and difficult to associate with specific revenues of specific periods. (Hi) Most intangible assets cannot be separated from the firm or physical property of the firm. They exist and have only in combination with the tangible assets of the firm.²

Mode of valuation The intangible assets have to be valued at cost less any amount amortized. **Cost of intangible assets.** When intangible assets are acquired by purchase individually or as part of total purchase of business, the determination of the cost of intangible asset is similar to the computation of cost of plant and machinery or any other asset under similar circumstances. However, when intangible assets are acquired by self-development, the computation of their cost involves a number of difficulties on account of the necessity for apportionment of joint cost on a suitable basis. For example most of the costs of patents, trade marks, trade names, etc., involve joint costs. Many patents may emerge from joint research and development expenditure and similarly several trade marks and trade names may be advertised jointly. In order to put a proper value on each of the patent or trade mark it is necessary to apportion the joint costs by appropriate costing methods. In spite of all precautions the results may not be fairly satisfactory.

The valuation of intangible assets also creates problems since they cannot be physically verified. The difficulty and uncertainty regarding the valuation of intangible asset has been to a great extent removed by the issue of Opinion No. 17 by the Accounting Principles Board (USA). The text of the opinion is given below :

"The Board concludes that a company should record at purchased costs the intangible assets acquired from other enterprises or individuals. Costs of developing, maintaining or restoring intangible assets which are not specifically identifiable, have indeterminate lives, or are inherent in a will—should be deducted from income when incurred."

Intangible assets acquired singly should be recorded at cost at date of acquisition. Cost is measured by the amount of cash disbursed, the fair value of other assets distributed, the present value of amount to be paid for liabilities incurred or the fair value of consideration received for stock issued.

Intangible assets acquired as part of a group of assets or as part of an acquired company should also be recorded at cost at date of acquisition. Cost is measured differently for specifically identifiable intangible assets and those lacking specific identification. The cost of identifiable intangible assets is an assigned part of the total cost of the group of assets or enterprise acquired normally based on the fair values of the individual assets. The cost of unidentifiable intangible assets is measured by the difference between the cost of the group of assets or enterprise acquired and the sum of the assigned costs of individual tangible and identifiable intangible assets acquired less liabilities assumed. Cost should be assigned to all specifically identifiable intangible assets; cost of unidentifiable assets should not be included in goodwill.

Amortization of intangible assets. The term "amortization" refers to systematically writing off the cost of intangible assets. For this purpose intangible assets can be classified into two categories :

- (i) Assets having a limited life; and
- (ii) Assets having an indefinite or unlimited life.

Earlier it was the opinion of the accountants that only assets having limited, economic life should be amortized, while those having an indefinite or unlimited economic life should be maintained intact until they became worthless. They were to be written off only at that time. This gave the management considerable leverage regarding the accounting for intangible assets. However, this controversy was set at rest in 1970 by the announcement of Opinion No. 17 by the Accounting Principles Board (USA) providing for amortization of all intangible assets. The Board observed

"The Board believes that the value of intangible assets at any one date eventually disappears and that the recorded

cost of intangible asset should be amortized by the systematic charges to income over the periods estimated to be benefited." The Board provided for the following factors to be taken into account while determining the economic lives of the intangible assets.

- (i) Legal, regulatory, or contractual provisions when they place a limit on the maximum economic life.
- (ii) Provisions for renewal or extension of rights or privileges covered by specific intangible assets,
- (iii) Effects of obsolescence, customer demand, competition, rate of technological change, and other economic factors,
- (iv) Possibility that economic life of intangibles may be related to life expectancies of certain groups of employees.
- (v) Expected actions of competitors, regulatory bodies and others,
- (vi) An apparently unlimited economic life may in fact be only indefinite and future benefits cannot be reasonably projected,
- (vii) An intangible asset may be a composite of many individual factors with varying estimated economic lives.

The period for amortization of intangible assets should be determined carefully after a careful review of all relevant factors given above. It should, however, be noted that the cost of intangible asset should not be written off in the period of acquisition unless some unusual circumstances cause the intangible assets to become worthless. The Board further provided that the period of amortization should not exceed 40 years.

Classification of intangible assets For valuation purpose, intangible assets can be classified into two categories :

- (i) Identifiable intangible assets; and
- (ii) Unidentified intangible assets.

Identifiable intangible assets are those which can be indentified as distinct and separable property rights. Examples of such assets are: patents, trade marks, copy rights, etc.

Such assets can be acquired separately or as a part of group of assets or they can be developed internally.

Unidentifiable intangible assets are those which are not capable of being identified easily. Of course, they can be developed internally or purchased from others as part of group of assets. However, they cannot be acquired individually, the most common example of such assets is the goodwill of the business. It is well known that goodwill as such cannot be individually acquired. It is, as a matter of fact, acquired with the total assets of the business. Its value is calculated by deducting from the purchase consideration the amount of tangible assets acquired by the business.

Valuation of specific intangible assets The mode of valuation of some specific intangible assets including both identifiable and unidentifiable is being discussed in the following pages.

Goodwill Goodwill is an intangible asset arising from business connections or trade name or reputation of an enterprise. It may therefore be defined as the estimated value of reputation of a business. It is an evidence of this fact that the business is earning at a rate higher than the normal rate of return earned by similar business engaged in the trade or industry. The same view has been expressed by Kohler. According to him the goodwill is "The present value of the expected future income in excess of a normal return on the investment in intangible assets, not a recorded amount unless paid for."

It may be noted goodwill can either be purchased or self-generated. Where a business is purchased, the cost of goodwill is the excess of the purchase consideration over the net tangible assets acquired by the business. Goodwill is, therefore, in essence a "master valuation account"-the missing link that reconciles the current fair value of a business entity as a going concern with the current fair value of the sum of its parts.

Goodwill is also self-generated by the business over a period of time by establishing its reputation which gives it the ability to earn super profits as compared to a normal business. The valuation of self-generated goodwill is made by business at the time of admission or retirement of a partner or the sale of the business.

Patents A patent is a grant of right by the Government giving the owner the exclusive right to manufacture and sell a particular invention for a period of 16 years (in India). The rights granted by the patent expires after the period of 16 years unless the term is extended by the Government. The valuation of patent is done at cost less any amount amortized. The cost of the patent can be determined as follows :

¹Eric L.; Kohler "A Dictionary for Accountants"—3rd edition (Prentice Hall, 1963), p. 269.

²E.S. Hendriksen "Accounting Theory", 4th edition, pp. 400-401.

- (a) In case a patent is purchased outright, its cost is measured by the purchase price and relevant expenditure.
- (b) In case a patent is developed as a result of the firm's research and development efforts, the cost assigned to the patent would include only the direct legal and other costs incurred in obtaining the patent. The research and development costs incurred in the company laboratory would not be assigned to the patent since such costs must have been recovered as a revenue expense by the business.

The cost of the patent would be amortized over the economic life of the patent using the Fixed Installment Method.

Copy rights A copyright is the grant of an exclusive right to publish, sell or otherwise control literary or artistic product for a certain period. The valuation of copyright is a difficult proposition since it does not have a firm value on account of loss in its value due to the lapse of time. An estimate has to be made of the period over which the benefit from the copyright will be available. The cost of the copyright will be amortized over the period during which revenue is expected from the copyright. The copyright should, therefore, be valued at 'cost less any amount amortized' as stated above.

Franchises A franchise is a right or privilege received by a business entity for the exclusive right to conduct business in a certain geographic area. The franchise may be granted by the Government or by one entity to another. For example, public utility companies receive a franchise to conduct their operations exclusively in a particular area. Similarly, a retailer may obtain an exclusive right from a manufacturer to sell certain products within a specified territory.

The amount paid for franchise should be amortized over the expected economic life of the franchise. For example, if the right to operate under a franchise is limited to 10 years and the cost paid is a sum of rupees one lakh, a sum of Rs 10,000 should be amortized every year. In case a period of 3 years has expired after obtaining the franchise, the franchise should be valued at Rs 70,000 i.e., the cost of Rs 1,00,000 less Rs 30,000 amortized so far.

Preliminary expenses These are expenses incurred at the time of promotion or incorporation of a company. The following expenses fall in this category.

- (a) Cost of printing the memorandum, the articles, the prospectus, application forms, letters of allotment, etc.
- (b) Legal expenses incurred for incorporating the company.
- (c) Stamp Duty and Registration Fees.
- (d) The accountant's or valuer's fees for reports, certificates, etc.
- (e) Cost of preparing, printing, stamping share certificates, debenture certificates, etc., and
- (f) Cost of advertising the prospectus, etc.

Preliminary expenses are of a capital nature. They are not represented by tangible assets and therefore should be written off out of profits over a period of time. In India the Income Tax Act 1961 permits writing off such expenses over a period of 10 years for taxation purposes. Such expenses should, therefore, be valued at cost less any amount written off so far.

Patents (a) In case a patent is purchased outright its cost is measured by the purchase price including expenses, stamp duty, etc. (b) In case a patent is developed within the enterprise, the cost assigned to the patent would include only the direct legal and other costs incurred in developing the patent.

The cost of the patent should be amortized over its legal time of validity or its economic life whichever is shorter. The amortization is usually done according to the Fixed Instalment Method. **Know how** Know how is generally recorded in the books only when some consideration in money's worth has been paid for it. Know how is generally of two types-

- (a) relating to manufacturing process; and
- (b) relating to plans, designs and drawings of buildings or plant and machinery.

Know how relating to manufacturing processes is usually taken as a revenue expense in the period in which it is incurred. Know how relating to plans, designs and drawings of buildings, plant and machinery is capitalized under the relevant asset heads. Depreciation is calculated on the total cost of those assets including the cost of the know-how capitals. Thus, such know how is valued at cost less any depreciation charged.

In case the amount paid for know how is a composite sum in respect of both the types of know how stated above, the consideration paid should be apportioned amongst them on a reasonable basis. It may be noted that where the consideration for the supply of know how is a series of recurring annual payments, viz., royalties, technical assistance fees, contribution to research, etc., such payment should be charged to the Profit and Loss Account of the relevant accounting year.

Valuation of Investments

Nature Investment are "Assets held not for operational purposes or for rendering services *i.e.*, assets other than fixed assets or current assets."¹

Part I of Schedule VI of the Companies Act requires a company to show investment in its Balance Sheet in the form of following categories :

- (i) Investments in Government or Trust Securities.
- (ii) Investments in shares, debentures or bonds.
- (iii) Immovable Property.
- (iv) Investments in the capital of partnership firms.

The above investments may be held by a business either for a short period or for a long period. In the former case they are termed as 'current (or temporary) investments' while in the later case they are termed as "long-term investments."

The objective of purchasing current investments is to invest the temporary surplus of cash with the business to earn interest or dividend. These investments are normally considered as current assets and the business intends to encash them whenever necessary in the normal course of business operations.

The long-term investments are acquired with long-term objectives. They are not meant for realisation and conversion into cash under normal circumstances. These investments are, therefore, of the nature of Fixed Assets. Such investments may be made for different purposes *viz.*, gaining control of another company and making such a company as a subsidiary company, creating closer ties with major suppliers or retail outlets or diversifying by acquiring ownership interest in companies in other industries.

Mode of valuation AS: 13 "Accounting for Investments" lays down the basis for valuation of investments. According to the Standard, current investments should be valued at cost or market price whichever is less. However, long-term investments should be valued at cost. In case of a permanent decline in the value of such investments, adequate provision should be made out of the Profit and Loss Account.

The term "cost" include brokerage and other expenses incurred on acquisition of investments. In case investments are acquired by issue of shares or other securities, the fair value of security issued (which may be indicated by the issue price as determined by the statutory authorities) should be taken as the cost of investments.

The salient features of AS: 13 are given at the end of the chapter for the sake of ready reference.

ACCOUNTING STANDARD 10 (AS 10) ACCOUNTING FOR FIXED ASSETS

The Accounting Standards Board of the Institute of Chartered Accountants of India has issued AS 10 "Accounting for Fixed Assets." The salient feature of the AS 10 are as follows:

Definitions

Following terms have been used in the standard with their meaning specified :

- (i) Fixed Asset is an assets held with the intention of being used on a continuing basis for the purpose of producing or providing goods or services and is not held for sale in the normal course of business.
- (ii) Fair Market Value is the price that would be agreed to in an open and unrestricted market between knowledgeable and willing parties dealing at arm's length who are fully informed and are not under any compulsion to transact.
- (iii) Gross Book Value of a fixed asset is its historical cost or other amount substituted for historical cost in the books of account or financial statements. When this amount is shown net of accumulated depreciation, it is termed as net book value.

Determination of Gross Book Value

The gross book value of the fixed asset should be either historical cost or a revaluation computed in accordance with the standard as given below:

Accounting for fixed assets included at historical cost. The method of accounting for fixed assets included at historical cost is as follows :

- (i) When a fixed asset is acquired in exchange or in part exchange for another asset, the cost of the asset acquired should be recorded either at fair market value or at the net book value of the asset given up, adjusted for any

balancing payment or receipt of cash or other consideration. For these purposes fair market value may be determined by reference either to the assets given up or to the asset acquired, whichever is more clearly evident. Fixed asset acquired in exchange for share or other securities in the enterprise should be recorded at its fair market value, or the fair market value of the securities issued, whichever is more clearly evident.

- (ii) The cost of a fixed asset should comprise its purchase price and any attributable costs of bringing the asset to its working condition for its intended use.
- (iii) Subsequent expenditures related to an item of fixed asset should be added to its book value only if they increase the future benefits from the existing asset beyond its previously, assessed standard of performance.
- (iv) The cost of self-constructed fixed asset should comprise those costs that relate directly to the specific asset and those that are attributable to the construction activity in general and can be allocated to the specific asset.
- (v) Loss arising from the retirement or gains or losses arising from disposal of fixed asset which is carried at cost should be recognised in the profit and loss statement.
- (vi) Fixed asset should be eliminated from the financial statements on disposal or when no further benefit is expected from its use and disposal,
- (vii) Material items retired from active use and held for disposal should be stated at the lower of their net book value and net realisable value and be shown separately in the financial statements.

Accounting for re-valued fixed assets The method of accounting of revalued fixed asset is as follows :

- (i) When a fixed asset is revalued in financial statements, the entire class of assets should be revalued, or the selection of assets for revaluation should be made on a systematic basis. The basis should be disclosed
- (ii) The revaluation in financial statements of a class of assets should not result in the net book value of that class being greater than the recoverable amount of assets of that class.
- (iii) When a fixed asset is revalued upwards, any accumulated depreciation existing at the date of the revaluation should not be credited to the profit and loss statement.
- (iv) An increase in net book value arising on revaluation of fixed assets should be credited directly to owners' interests under the head of revaluation reserve, except that, to the extent that such increase is related to and not greater than a decrease arising on revaluation previously recorded as a charge to the profit and loss statement, it may be credited to the profit and loss statement. A decrease in net book value arising on revaluation of fixed asset should be charged directly to the profit and loss statement except that to the extent that such a decrease is related to an increase which was previously recorded as a credit to revaluation reserve and which has not been subsequently reversed or utilised, it may be charged directly to that account.
- (v) On disposal of a previously revalued item of fixed asset, the difference between net disposal proceeds and the net book value should be charged or credited to the profit and loss statement except to the extent that such a loss is related to an increase which was previously recorded as a credit to revaluation reserve and which has not been subsequently reversed or utilised, it may be charged directly to that account.

Fixed assets acquired on hire basis Fixed assets acquired on hire purchase terms should be recorded at their cash value, which, if not readily available, should be calculated by assuming an appropriate rate of interest. They should be shown in the balance sheet with an appropriate narration to indicate that the enterprise does not have full ownership thereof.

Fixed asset owned jointly In the case of fixed assets owned by the enterprise jointly with others, the extent of the enterprise's share in such assets, and the proportion of the original cost, accumulated depreciation and written down value should be stated in the balance sheet. Alternatively, the pro-rata cost of such jointly owned assets may be grouped together with similar fully owned assets with an appropriate disclosure thereof.

Fixed assets acquired for a consolidated price When several fixed assets are purchased for consolidated price, the consideration should be apportioned to the various assets on a fair basis as determined by competent valuers.

Goodwill Goodwill should be recorded in the books only when some consideration in money or money's worth has been paid for it. Whenever a business is acquired for a price (payable in cash or in shares or otherwise) which is in excess of the value of the net assets of the business taken over, the excess should be termed as "goodwill".

¹Meigs, Mosich and Johnson: "Intermediate Accounting", 4th edition, p. 569.

Patents The direct costs incurred in developing the patents should be capitalised, and written off over their legal term of validity or over their working life, whichever is shorter.

Knowhow Amount paid for knowhow for the plants, lay-out and designs of building and/or design of the machinery should be capitalised under the relevant asset heads, such as, buildings, plants and machinery, etc. Depreciation should be calculated on the total cost of those assets, including the cost of the knowhow capitalised. Where the amount paid for knowhow is a composite sum i- respect of both the manufacturing process as well as plants, drawings and designs for buildings, plant and machinery, etc., the management should apportion such consideration into two parts on a reasonable basis.

Disclosure The following information should be disclosed in the financial statements :

- (i) gross and net book value of fixed assets at the beginning and end of an accounting period showing additions, disposals acquisition and other movements;
- (ii) expenditure incurred on account of fixed assets in the course of construction or acquisition; and
- (iii) revalued amounts substituted for historical costs of fixed assets, the method adopted to compute the revalued amounts, the nature of indices used, the year of any appraisal made, and whether an external valuer was involved, in case where fixed assets are stated at revalued amounts.

Effective Date The standard is mandatory from accounting period beginning on or after 1st April, 1991.

ACCOUNTING STANDARD 13 (AS 13)¹ ACCOUNTING FOR INVESTMENTS

Following are the salient features of AS 13 : "Accounting for Investments" issued by the Institute of Chartered Accountants of India.

Definitions

The following terms are use in this Statement with the meanings assigned :

Investments are assets held by an enterprise for earning income by way of dividends, interest, and rentals, for capital appreciation, or for other benefits to the investing enterprise. Assets held as stock-in-trade are not 'investments.'

A current investment is an investments that is by its nature readily realisable and is intended to be held for not more than one year from the date on which such investment is made.

Current investments are in the nature of current assets, although the common practice may be to include them in investments.

A long-term investment is an investment other than a current investment.

An investment property is an investment in land or buildings that are not intended to be occupied substantially for use by, or in the operations of, the investing enterprise.

Fair value is the amount for which an asset could be exchanged between a knowledgeable, willing buyer and a knowledgeable, willing seller in an arm's length transaction. Under appropriate circumstances, market value or net realisable value provides an evidence of fair value.

Market value is the amount obtainable from the sale of an investment in an open market, net of expenses necessarily to be incurred on or before disposal.

Accounting Standard

Classification of Investments

1. An enterprise should disclose current investments and long-term investments distinctly in its financial statements.
2. Further classification of current and long-term investments should be as specified in the statute governing the enterprise. In the absence of a statutory requirement, such further classification should disclose, where applicable, investments in :
 - (a) Government or Trust securities;
 - (b) Shares, Debentures or Bonds;
 - (c) Investment Properties;
 - (d) Others—specifying nature.

¹The Chartered Account Sept. 1993, p. 208.

Cost of Investments

3. The cost of an investment should include acquisition charges such as brokerage, fees and duties.
4. If an investment is acquired, or partly acquired, by the issue of shares or other securities, the acquisition cost should be the fair value of the securities issued (which in appropriate cases may be indicated by the issue price as determined by statutory authorities). The fair value may not necessarily be equal to the nominal or par value of the securities issued. If an investment is acquired in exchange for another asset, the acquisition cost of the investment should be determined by reference to the fair value of the asset given up. Alternatively, the acquisition cost of the investment may be determined with reference to the fair value of the investment acquired if it is more clearly evident.

Investment Properties

5. An enterprise holding investment properties should account for them as long-term investments. *Carrying Amount of Investments*
6. Investments classified as current investments should be carried in the financial statements at the lower of cost and fair value determined either on an individual investment basis or by category of investment, but not on an overall (or global) basis.
7. Investments classified as long-term investments should be carried in the financial statements at cost. However, provision for diminution shall be made to recognise a decline, other than temporary, in the value of the investments, such reduction being determined and made for each investment individually.

Reclassification of Investments

Where, long-term investments are reclassified as current investments, transfers are made at the lower of cost and carrying amount at the date of transfer. Where investments are reclassified from current to long-term, transfers are made at the lower of cost and fair value at the date of transfer.

Changes in Carrying Amounts of Investments

8. Any reduction in the carrying amount and any reversals of such reductions should be charged or credited to the profit and loss statement.

Disposal of Investments

9. On disposal of an investment, the difference between the carrying amount and net disposal proceeds should be charged or credited to the profit and loss statement. When disposing of a part of the holding of an individual investment, the carrying amount to be allocated to that part is to be determined on the basis of the average carrying amount of the total holding of the investments.¹ *Disclosure*
10. The following information should be disclosed in the financial statements;
 - (a) the accounting policies for determination of carrying amount of investments, and
 - (b) classification of investments as specified paragraphs 1 and 2 above;
 - (c) the amount included in profit and loss statement for:
 - (i) interest, dividends (showing separately dividends from subsidiary companies), and rentals on investments showing separately such income from long-term and current investments. Gross income should be stated, the amount of income tax deducted at source being included under advance Taxes Paid.
 - (ii) profits and losses on disposal of current investments and changes in the carrying amount of such investments; and
 - (iii) profits and losses on disposal of long-term investments and changes in the carrying amount of such investments;
 - (d) significant restrictions on the right of ownership, realisability of investments or the remittance of income and proceeds of disposal;

- (e) the aggregate amount of quoted and unquoted investments, giving the aggregate market value of quoted investments;
- (f) other disclosures as specifically required by the relevant statute governing the enterprise.

Effective Date

11. This Accounting Standard comes into effect financial statements covering periods commencing on or after April 1, 1995. In respect of shares, debentures and other securities held as stock-in-trade, the cost of stocks disposed of is determined by applying an appropriate cost formula (e.g. first-in, first-out, average cost, etc.). These cost formulae are the same as those specified in Accounting Standard (AS) 2, in respect of *Valuation of Inventories*.

References

1. Edger O. Edward, The State of Current Value Accounting, *Accounting Review*, April 1975, pp. 235-245.
2. American Institute of Certified Public Accountants Objectives of Financial Statements, New York ; AICPA, October 1973, pp. 41-43.
3. Accounting Principles Board, Statement No. 4 Basic Concepts and Accounting Principles Underlying Financial Statement of Business Enterprises, New York : AICPA, 1970, pp. 49-50.
4. Yuji Ijiri, *Foundations of Accounting Measurement*, Englewood Cliffs : Prentice Hall, 1967, p. 70.
5. Edson S. Hendriken, *Accounting Theory*, Homewood, Richard D. Irwin 1984, p. 256.

CHAPTER-8

LIABILITIES AND EQUITY

Liabilities may be defined as currently existing obligation which a business enterprise intends to meet at some time in future. Such obligations arise from legal or managerial considerations and impose restrictions on the use of assets by the enterprise for its own purposes. Accounting Board of USA defines liabilities as “economic obligations of an enterprise that are recognised and measured in conformity with generally accepted accounting principles. Liabilities also include certain deferred credits that are not obligations but that are recognised and measured in conformity with generally accepted accounting principles.”

Financial Accounting Standard Board defines liabilities as follows:

“liabilities are probable future sacrifices of economic benefits arising from present obligation of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or services.”

Accounting to Institute of Chartered Accounting of India, liability is “the financial obligation of an enterprise other than owners’ funds.”

Liabilities possess the following characteristics:

1. **Required future sacrifice of assets** — The essence of a liability is a duty or requirement to sacrifice assets in the future. A liability requires an enterprise to transfer assets, provide services or otherwise expend assets to satisfy a responsibility it has incurred or that has been imposed on it.
Most liabilities presently included in financial statements qualify as liabilities because they require an enterprise to sacrifice assets in future. Thus, accounts and bills payable, wages and salary payable, long-term debt, interest and dividends payable, and similar requirements to pay cash apparently qualify as liabilities.
2. **Liabilities and proceeds** — An enterprise commonly receives cash, goods, or services by incurring liabilities, and that which is received is often called proceeds, especially if cash is received. Receipt of proceeds may be evidence that an enterprise has incurred one or more liabilities, but it is not conclusive evidence. Proceeds may be received from cash sales or by issuing ownership shares — that is, from revenues or other sales of assets or from investment by owners — and enterprises may incur liabilities without receiving proceeds — for example, by imposition of taxes. The essence of a liability is a legal, equitable or constructive obligation to sacrifice economic benefits in the future rather than whether proceeds were received by incurring it. Proceeds were received by incurring it. Proceeds themselves are not liabilities.
3. **Obligation of a particular enterprise** — Liabilities are in relation to specific enterprises, and a required future sacrifice of assets is a liability of the particular enterprise that must make the sacrifice. Most obligations that underlie liabilities stem from contracts and other agreements that are enforceable by court or from governmental actions that have the force of law, and the fact of an enterprise’s obligation is so evident that it is often taken for granted.
4. **Occurrence of a past transaction or event** — The obligations must arise out of some past transaction or event. A liability is not a liability of an enterprise until something happens to make it a liability of that enterprise. The kinds of transactions and other events and circumstances that result in liabilities are the following. Acquisition of goods and services, imposition by law or governmental units, and acts by an enterprise that obligate it to pay or otherwise sacrifice assets to settle its voluntary non-reciprocal transfers to owners and others. In contrast, the act of budgeting the purchase of a machine and budgeting the payments required to obtain it result neither in acquiring an asset nor in incurring a liability. No transaction or event has occurred that gives the enterprise access to or control of future economic benefit or obligates it to transfer assets or provide service to another entity.

Many agreements specify or imply how a resulting obligation is incurred. For example, borrowing agreements specify interest rates, periods involved, and timing of payments, rental agreements specify rentals and periods to which they apply. The occurrence of the specify event or events results in a liability.

Transactions or events that result in liabilities imposed by law or governmental units also are often specified or inherent in the nature of the statute or regulation involved. For example, taxes are commonly assessed for calendar or fiscal years, fines and penalties stem from infractions of the law or failure of comply with provisions of law or regulations, damages result from selling defective products.

5. **Capital and dividend**—Capital invested by the owner or shareholders in an enterprise is not regarded as an external liability in financial accounting. But shareholders have a right at law to the payment of a dividend once it has been declared. As a result, unpaid or unclaimed dividends, are shown as current liabilities. It is the practice to show proposed dividends as current liabilities also, since such proposed dividends are usually final dividends for the year which must be approved at the annual general meeting before which the accounts for the year must be laid.
6. **Discontinuance of liability** — A liability once incurred by an enterprise remains a liability until it is satisfied in another transaction or other event or circumstance affecting the enterprise. Most liabilities are satisfied by cash payments. Others are satisfied by the enterprise's transferring assets or providing services to other entities, and some of those—for example, liabilities to provide magazines under a prepaid subscription agreement—involve performance to earn revenues. Liabilities are also sometimes eliminated for forgiveness, compromise or changed circumstances.

Valuation of liabilities

The Valuation of liabilities is part of the process of measuring both capital and income, and is important to such problems as capital maintenance and the ascertainment of a firm's financial position. According to Borton, "the requirements for an accurate measure of the financial position and financial structure should determine the basis for liability valuation. Their valuation should be consistent with the valuation of assets and expenses." The need for consistency arises from the objectives of liability valuation, which are similar to those to asset valuation. Probably the most important of these objectives is the desire to record expenses and financial losses in the process of measuring income. However, the valuation of liabilities should also assist investors and creditors in understanding the financial position.

Liabilities may be valued (i) at their discounted net values in accordance with the manner of valuing assets in economics; (ii) in accordance with accounting conventions, they may be recorded at their historic value, that is, the valuation attached to the contractual basis by which they were created. There is no difference between the two methods of valuation as regards liabilities which are payable immediately, and it is only as the maturity date of liabilities lengthens that the difference appears. While accounting conventions dictate that the valuation of liabilities should be based on the sum which is payable, it is accounting practice to make a distinction between current and long-term liabilities. As regards current liabilities there is little difference between the discounted net value and the contractual value of liabilities. In this connection, current liabilities are defined as those which will mature during the course of accounting period. The gap between the two methods of valuation is significant as regards long term liabilities. Long term liabilities are valued on the basis of their historical value, that is, by reference to the contract from which they originated, and hence, during periods of inflation or where the interest payable is less than the current market rate of interest, the accounting valuation will certainly be overstated by comparison with the discounted net value.

CONTINGENT LIABILITIES

A contingent liability is not a legal or effective liability; rather it is a potential future liability. The amount of a contingent liability may be known or estimated. Contingent liabilities are those which will arise in the future only on the occurrence of a specified event. Although they are based on past contractual obligations, they are conditional rather than certain liabilities. Thus, guarantee given by the firm are contingent liabilities rather than current liabilities. If a holding company has guaranteed the overdraft of one of its subsidiary companies, the guarantee is payable only in the event of the subsidiary company being unable to repay the overdraft. Contingent liabilities are not formally recorded in the accounts system, but appears as footnotes to the balance sheet.

CURRENT LIABILITIES

Current liabilities are those that will be paid from among the assets listed as current assets. Current liabilities are debtor obligations payable within one year of the balance sheet date. However, if a firm's operating cycle exceeds a year, current liabilities are those payable within the next cycle. The Committee on Accounting Procedure of the AICPA defined current liabilities as follows:

"The term current liabilities is used principally to designate obligations whose liquidation is reasonably expected

to require the use of existing resources properly classifiable tend to be fairly permanent in the aggregate, but they differ from long term liabilities in several ways. The main distinctive features are: (1) they require frequent attention regarding the refinancing of specific liabilities; (2) they provide frequent opportunities to shift from one source of funds to another; and (3) they permit management to vary continually the total funds from short term sources.

One of the major differences between the definition of current assets and the definition of current liabilities is that the current portion of long term debt is re-classified each year as a current liability, and the current portion of fixed assets is not. The reason for this difference is found in the conventional emphasis on liquidity and the effect on cash and cash flows; the current portion of long term debt will require current cash or cash becoming available, but the current depreciations is only indirectly related to any obligations or cash flows during the current period.

Classification of Current Liabilities

Current liabilities can be divided into two main groups based on the means by which their values are determined. These groups include (A) Liabilities with specific values usually determined from contracts and (B) Liabilities whose values must be estimated. Some liabilities falling under these two categories are being discussed here.

1. **Accounts payable** — Trade accounts payable are debts owed to trade creditors. They normally arise from the purchase of goods or services. Particular care must be exercised at the end of the accounting year to ensure that all trade payables arising from the purchase of goods and services are recorded. Accounts payable to trade creditors may be recorded either at the gross invoice price or at the net invoice price (i.e. less cash discounts). Showing the invoice at gross is the more common practice, primarily because it is more expedient. If this method is followed and cash discounts are material in amount, the discounts available on unpaid accounts should be recognised at the end of the period and subtracted from the liability account. The balancing entry reduces inventories or purchases. On the other hand, if the accounts payable to trade creditors are recorded at the net amount, any discounts not to be taken must be added back to the amount payable on the balance sheet date. The balancing entry should be made to a loss account, because such lapsed discounts involve very high interest rates and indicate poor financial management.
2. **Bills (Notes) Payable** — Although bills payable may arise from the same sources as trade accounts payable, they are evidenced by negotiable instruments and therefore should be reported separately. The maturity dates of these bills may extend from a few days to a year, and they may be either interest-bearing or non-interest-bearing. It is normally customary to record trade bills at their face value and to accrue interest on the interest-bearing notes, using a separate Interest Payable Account.
Interest is sometimes subtracted from the face value of a bill when funds are borrowed from a bank or financial institution. This is called discounting the note, and the discount is the difference between the face value of the bills payable and proceeds from the loan.
3. **Interest Payable** — Interest payable is typically the result of an accrual and is recorded at the end of each accounting period. Interest payable on different types of items is usually reported as a single item. In the absence of significant legal differences in the nature or status of the interest, the amounts can be combined. Interest in default on bonds is an example of an item sufficiently important to warrant separate reporting. Interest payable on non-current liabilities, such as long term debt, should be listed as current liability, because the interest is payable within the next operating cycle.
4. **Wages and Salary Payable** — A liability for unpaid wages and salaries is credited when employees are paid at fixed intervals that do not coincide with the balance sheet date. Unclaimed wages that have not been paid to employees because of failure to claim their earnings should be included in salaries and wages payable.
5. **Current Portion of Long-term Debt** — Current liabilities usually include that portion of long term debt which becomes payable within the next year.
6. **Advances from Customers** — Money received in advance from customers create a liability for the future delivery of goods or services. The advances are initially recorded as liabilities and are then transferred from liability account to revenue account when the goods or services are delivered. Advance receipts from customers for the performance of services or for future delivery of goods are current liabilities only if the performance or delivery is to be completed within the time period included in the definition of current liabilities.

whereas deposits received in two years would be a non-current liability. In some cases, customer deposits may not be listed as current liabilities because their return is not normally contemplated within the time period used to define current liabilities.

CURRENT AND NON-CURRENT DISTINCTIONS

The classification of items as current and non-current in practice is largely based on convention rather than on any one concept. The conventional definitions of current assets and current liabilities are assumed to provide some information to financial statements users, but they are far from adequate in meeting the desired objectives. These inadequacies can be summarized as follows:

1. One of the main objectives of the classification is to present information useful to creditors. However, it is far from adequate in serving this purpose. Creditors are primarily interested in the ability of the firm to meet its debts as they mature. This ability depends primarily on the outcome of projected operations; the pairing of current liabilities with current assets assumes that the latter will be available for payment of the former.
2. Creditors are also interested in the solvency of the firm — the probability of obtaining repayment in case the firm is liquidated. It is contended that special statements should be cash in liquidation and the special restrictions regarding the use of particular assets or resources of cash. In the conventional balance sheet, the pairing of current assets with current liabilities leads to the false assumption that, in liquidation, the short term creditors have necessarily some priority over the current assets and that only the excess is available to long term creditors.
3. As a device for describing the operations of the firm, the classification is also defective. Such assets as interest receivable do not arise from the same type of operations as accounts receivable and inventories, but they are all grouped together as current assets. Among the current liabilities, dividends payable does not arise from the same type of operations as accounts payable, and from an operational point of view, the current portion of long term debt is not dissimilar to the remainder of the long term debt.
4. The current assets and current liability classifications do not help in description of the accounting process or in the description of valuation procedures.

Hendriksen suggests that it would be better to concentrate on a classification that would permit a valid prediction of operating cash flows and then present specific information of interest to creditors in a separate statement. It may be better to restrict the objectives and present special statements for special purposes than to present a general purpose statement without specific stated objectives. International Accounting Standard Committee has listed the following limitations of the current and Non-current distinction:

1. Many regard an excess of current assets over current liabilities as providing some indication of the financial well-being of an enterprise, while an excess of current liabilities over current assets is regarded an indication of financial problems. It is not appropriate to draw such conclusions without considering the nature of the operations of the enterprise and the individual components of its current assets and current liabilities.
2. The segregation of assets and liabilities between current and non-current is usually not considered appropriate in the financial statements of enterprises with indeterminate or very long operating cycles.
3. The Current: non-current distinction is generally believed to provide an identification of a relatively liquid portion of an enterprise's total capital that constitutes a margin or buffer for meeting obligations within the ordinary operating cycle of an enterprise. However, as long as a business is going concern, it must, for example, continuously replace the inventory that it realizes with new inventory in order to carry on its operations. Also, current assets may include inventories that are not expected to be realized in the near future. On the other hand, many enterprises finance their operations with bank loans that are stated to be payable on demand and are hence classified as current liabilities. Yet, the demand feature may be primarily a form of protection for the lender and the expectation of both borrower and lender is that the loan will remain outstanding form some considerable period of time.
4. Thus, while many believe that the identification of current assets and liabilities is a useful tool in financial analysis, others believe that the limitations of the distinction make it of little use or even misleading in many circumstances. Imposition of a general requirement to identify current assets and liabilities in financial state-

ments might impede further consideration of these questions. Accordingly, this Statement is intended only to harmonize practices followed by enterprises that choose to identify current assets and liabilities in their financial statements.

NATURE OF OWNERSHIP EQUITIES

Equity is the residual interest in the assets of an entity that remains after deducting its liabilities. In a business enterprise, the equity is the ownership interest. Ownership equity is defined as the excess of total assets over total liabilities. It is a residual amount that represents the book value of the owners' interest in the business enterprise.

According to Concept No.3 of FASB (U.S.A.), the following are the characteristics of equity:

1. An enterprise may have several types of equity (e.g. equity share, preference share) with different degrees of risk stemming from different rights to participate in distributions of enterprise assets or different priorities of claims on enterprise assets in the event of liquidation. That is, some classes of owners may bear relatively more of the risks of an enterprise's unprofitability or may benefit relatively more from its profitability (or both) than other classes of owners.
2. Owners' equity is originally created by owners' investments in an enterprise and may from time to time be augmented by additional investments by owners. Equity is reduced by distributions by the enterprise to owners. However, the distinguishing characteristics of owners' equity is that it inevitably decreases if the enterprise is unprofitable and inevitably increases if the enterprise is profitable, reflecting the fact that owners bear the ultimate risks of and reap the ultimate rewards from the enterprise's operations and the effects of other events and circumstances that affect it. Ultimately, owners' equity is the interest in enterprise assets that remains after liabilities are satisfied, and in that sense it is a residual.
3. Equity in a business enterprise stems from ownership rights. It involves a relation between an enterprise and its owners as owners rather than as employees, suppliers, customers, lender or in some other non-owner role. Since it ranks after liabilities as a claim to or interest in the assets of the enterprise, it is a residual interest. (a) equity is the same as net assets, the difference between the enterprise's assets and its liabilities, and (b) equity is enhanced or burdened by increases and decreases in net assets from sources other than investments by owners and distributions to owners. Owners' equity is the interest that, perhaps in varying degrees, bears the ultimate risk of enterprise failure and reaps the ultimate rewards of enterprise success.
4. Equity represents the source of distributions by an enterprise to its owners, whether in the form of cash dividends or other distributions of assets. Owners' and others' expectations about distributions to owners may affect the market prices of an enterprise's equity securities, thereby indirectly affecting owner compensation for providing equity or risk capital to the enterprise. Thus, the essential characteristics of equity centre on the condition for transferring enterprise assets to owners. Equity — an excess of assets over liabilities — is a necessary but not sufficient condition. Generally, an enterprise is not obligated to transfer assets to owners except in the event of the enterprise's liquidation unless the enterprise formally acts to distribute assets to owners, for example, by declaring a dividend. In this way, owners' equity has no maturity date.

Owners may sell their interests in an enterprise to others and thus may be able to obtain a return of part or all of their investments and perhaps a return on investments through a securities market, but those transactions do not normally affect the equity of an enterprise or its assets or liabilities.

Equity and Liabilities

Assets are probable future economic benefits owned or controlled by the enterprise. Liabilities and equity are mutually exclusive claims to or interest in the enterprise's assets by entities other than the enterprise. In a business enterprise, equity or the ownership interest is a residual interest, remaining after liabilities are deducted from assets and depending significantly on the profitability of the enterprise. Distributions to owners are discretionary, depending on its effect on owners after considering the needs of the enterprise and restrictions imposed by law, regulations, or agreement.

An enterprise is generally not obligated to transfer assets to owners except in the event of the enterprise's liquidation. In contrast, liabilities, once incurred, involve nondiscretionary future sacrifices of assets that must be satisfied on demand, at a specified or determinable date, or on occurrence of a specified event, and they take precedence over ownership interests.

Although the line between equity and liabilities is clear in concept, it may be obscured in practice. Often, several kinds of securities issued by business enterprises seem to have characteristics of both liabilities and equity in varying degrees or because the names given some securities may not accurately describe their essential characteristics. For example, convertible debt have both liability and residual interest characteristics, which may create problems in accounting for them. Preference share also often has both debt and equity characteristics and some preference shares may effectively have maturity amounts and dates at which they must be redeemed for cash.

TRANSACTIONS AND EVENTS THAT CHANGE EQUITY

Not all transactions and events affect owner's equity. In fact, transactions can be classified into following categories in terms of changes in equity.

- (A) All changes in assets and liabilities not accompanied by changes in equity — This class comprises four kinds of exchange transactions that are common in most business enterprises.
- (i) Exchange of assets for assets, for example, purchase of assets for cash or barter exchanges.
 - (ii) Exchange of liabilities for liabilities, for example, issues of notes payable to settle accounts payable or refundings of bonds payable by issuing new bonds to holders that surrender outstanding bonds.
 - (iii) Acquisition of assets by incurring liabilities, for example, purchase of assets on account, borrowing, or receipts of cash advances for goods or services to be provided in the future.
 - (iv) Settlements of liabilities by transferring assets, for example, repayments of borrowings, payments to suppliers on account, payments of accrued wages or salaries, or repairs (or payments for repairs) required by warranties.
- (B) All changes in assets or liabilities accompanied by changes in equity — This class comprises:
- (i) Comprehensive income whose components are:
 - (a) Revenues and expenses
 - (b) Gains and losses
 - (ii) All changes in equity from transfers between the enterprise and its owners. This comprises:
 - (a) Investments by owners in the enterprises
 - (b) Distributions by the enterprise to owners
 - (c) Changes within equity that do not affect assets or liabilities, for example, shares dividends, conversion of preferred shares into common shares, and some share recapitalization. This class contains only changes within equity and does not affect the definition of equity or its amount.

The transactions and events that influence (or do not influence) equity have been depicted in the following exhibit.

Exhibit = Transactions and Events and Equity

All transactions and other events and circumstances that affect an enterprise during a period

- a) All changes in assets and liabilities not accompanied by changes in equity.
- b) All changes in assets or liabilities accompanied by changes in equity
- c) Changes within equity that do not affect assets or liabilities
 1. Exchange of assets for assets
 2. Exchanges of liabilities for liabilities
 3. Acquisitions of assets by incurring liabilities
 4. Settlements of liabilities by transferring assets
1. Comprehensive income
2. All changes in equity from transfers between the enterprise and its owners
 - a) Revenues and expenses
 - b) Gains and losses

- a) Investments by owners
- b) Distributions to owners

Source: Financial Accounting Standards Board, Elements of Financial Statements of Business Enterprises, Concept No.3, Stamford: FASB, December 1980, p.23

THEORIES OF EQUITY

A business enterprise has assets and liabilities which can be defined and measured independently of each other. However, this is not true with ownership equities (also commonly known as proprietorship or shareholders equities in a company). The ownership equities as presented in the balance sheet represent either the current market value or the subjective value of the enterprise to the owners. The total amount presented in the statements is a result of the methods employed in measuring the specific assets and liabilities and from traditional structural accounting procedures. Since the total value of the firm to its owners cannot be measured from the valuation of specific assets and liabilities, the reported amount of equity cannot represent the current value of the rights of the owners. Instead of looking at specific rights to future benefits, as with assets, or at specific obligations of the enterprise, as with liabilities, the proprietorship or shareholders equity looks at the aggregate resources from the view of ownership rights, equities, or restrictions, depending upon the equity concept employed.

The different concepts (theories) of equity are as follows:

- 1. Entity Theory
- 2. Residual Equity Theory
- 3. Proprietary Theory
- 4. Fund Theory
- 5. Enterprise Theory

1. Entity Theory

In entity theory, the entity (business enterprises) is viewed as having separate and distinct existence from those who provided capital to it. Simply stated, the business unit rather than the proprietor is the centre of accounting interest. It owns the resources of the enterprises and is liable to both, the claims of the owners and the claims of the creditors. Accordingly, the accounting equation is:

Asset = Equities

or

Assets = Liabilities + Shareholders' Equity

Assets are rights accruing to the entity, while equities represent sources of the assets, consisting of liabilities and the shareholders' equity. Both the creditors and the shareholders are equity holders, although they have different rights with respect to income, risk, control, and liquidation. Thus, income earned is the property of the entity until distributed as dividends to the shareholders. Because the business unit is held responsible for meeting the claims of the equity holders, the entity theory is said to be income centered and consequently, income statement oriented. Accountability to the equity holders is accomplished by measuring the operating and financial performance of the firm. Accordingly, income is an increase in the shareholders' equity after the claims of other equity holders are met - for example, interest on long-term debt and income taxes. The increase in shareholders equity is considered income to the shareholders only if a dividend is declared. Similarly, undistributed profits remain the property of the entity because they represent the "company's proprietary equity in itself." It should be noted that strict adherence to the entity theory would dictate that interest on debt and income taxes be considered distributions of income rather than expenses. The general belief and interpretation of the entity theory, however, is that interest and income taxes are expenses.

The entity theory is most applicable to the corporate form of business enterprise, which is separate and distinct from its owners. The impact of the entity theory may be found in some of the accounting techniques and terminology used in practice. First, the entity theory favours the adoption of LIFO inventory valuation rather than FIFO because LIFO achieves a better income determination. Because of its better inventory valuation on the balance sheet, FIFO may be considered a better technique under the proprietary theory. Second, the common definition of revenues as production

an enterprise and expenses as goods and services consumed to obtain this revenue is consistent with the entity theory's preoccupation with an index of performance and accountability to equity holders. Third, the preparation of consolidated statements and the recognition of a class of minority interest as additional equity holders is also consistent with the entity theory. Finally, both the entity theory, with its emphasis on proper asset valuation, may be perceived to favour the adoption of current values or valuation bases other than historical costs.

2. Residual Equity Theory

The residual equity theory is concept somewhere between the proprietary theory and the entity theory. In this view, the equation becomes: $\text{Assets} - \text{Specific equities} = \text{Residual equity}$. The specific equities include the claims of creditors and the equities of preferred shareholders. However, in certain cases where losses have been large or in bankruptcy proceedings, the equity of the common shareholders may disappear and the preferred or the bondholders may become the residual equity holders.

The objectives of the residual equity approach is to provide better information to equity shareholders for making investment decision. In a company with indefinite continuity, the current value of equity share is dependent primarily upon the expectation of future dividends. Future dividends, in turn, are dependent upon the expectations of total receipts less specific contractual obligations, payments to specific equity holders, and requirements for reinvestments. Trends in investment values can also be measured, in part, by looking at trends in the value of the residual equity measured on the basis of current values. The income statement and statement of retained earnings should show the income available to the residual equity holders after all prior claims are met, including the dividends to preferred shareholders. The equity of the common shareholders in the balance sheet should be presented separately from the equities of preferred shareholders. The funds statement should also show the funds available to the firm for the payment of common dividends and other purposes.

3. Proprietary Theory

Under the proprietary theory, the entity is the agent, representative, or arrangement through which the individual entrepreneurs or shareholders operate. In this theory, the viewpoint of the owners group is the centre of interest and it is reflected in the way that accounting records are kept and the financial statements are prepared. The primary objective of the proprietary theory is the determination and analysis of the proprietor's net worth. Accordingly, the accounting equation is viewed as:

$$\text{Assets} - \text{Liabilities} = \text{Proprietor's Equity}$$

In other words, the proprietor owns the assets and liabilities. If the liabilities may be considered negative assets, the proprietary theory may be said to be asset centered and, consequently, balance-sheet oriented. Assets are valued and balance sheets are prepared in order to measure the changes in the proprietary interest or wealth. Revenues and expenses are as increases or decreases, respectively, in proprietorship not resulting from proprietary investments or capital withdrawals by the proprietor. Thus, net income is an increase in the proprietor's wealth to be added to capital. Losses, interest on debt, and corporate income taxes are expenses, while dividends are withdrawals of capital.

The proprietary theory has some influence on financial accounting techniques and accounting treatment of items. For example, 'net income' of a company, which is arrived at after treating interest and income taxes as expense, represents "net income to equity share holders" rather than to all providers of capital. Similarly, terms such as "earnings per share," "book value per share", and "dividend per share" indicate a proprietary emphasis.

The proprietary theory has two classifications depending upon who is considered to be included in the proprietary group. In the first type, only the common shareholders are part of the proprietor group, and preferred shareholders are excluded. Thus, preferred dividends are deducted when calculating the earnings of the proprietor (equity shareholders). This narrow form of the proprietary theory is identical to the "residual equity" concept in which the net income is extended to deduct preferred dividends and arrive at net income to the residual equity on which will be based the computation of earnings per share. In the second form of the proprietary theory, both the common capital and preferred capital are included in the proprietor's equity. Under this wider view, the focus of attention becomes the shareholder's equity section in the balance sheet and the amount to be credited to all shareholders in the income statement.

4. Fund Theory

The fund theory emphasizes neither the proprietor nor the entity but a group of assets and related obligations and restrictions governing the use of the assets called a "fund". Thus, the fund theory views the business unit as consisting of economic resources (funds) and related obligations and restrictions in the use of these resources. The accounting equation is viewed as:

$$\text{Assets} = \text{Restriction of Assets}$$

The accounting unit is defined in terms of assets and the uses to which these assets are committed. Liabilities represent a series of legal and economic restrictions on the use of assets. The fund theory is therefore asset centered in the sense that it places primary focus on the administration and appropriate use of asset. Neither the balance sheet nor the financial statement is the primary objective of financial reporting but the statement of sources and uses of funds is most important. This statement measures the operations of the firm in terms of sources and disposition of funds.

The fund theory is useful primarily to government and non profit organizations. Hospitals, Universities, cities and governmental units, for example, are engaged in multifaceted operations that use separate several funds. For such organizations, the information about sources and uses of funds is very useful as compared to financial statement information.

5. Enterprise Theory

The enterprise theory of the firm is a broader concept than the entity theory, but less well defined in its scope and application. In the entity theory the firm is considered to be a separate economic unit operated primarily for the benefit of the equity holders, whereas in the enterprise theory the company is a social institution operated for the benefit of many interested groups. In the broadest form these groups include, in addition to the shareholders and creditors, the employees, customers, the government as a taxing authority and as a regulatory agency, and the general public. Thus the broad form of the enterprise theory may be thought of as a social theory of accounting.

The enterprise theory concept is largely applicable to large companies which should consider the effect of its actions on various groups and on society as a whole. From an accounting point of view, this means that the responsibility of proper reporting extends not only to shareholders and creditors, but also to many other groups and to the general public. The most relevant concept of income in this broad social responsibility concept of the enterprise is the value-added concept. The total value added by the enterprise is the market value of the goods and services produced by the firm less the value of the goods and services acquired by transfer from other firms. Thus, value-added income includes all payments to shareholders in the form of dividends, interest to creditors, wages and salaries to employees, in the form of dividends, interest to creditors, wages and salaries to employees, taxes to governmental units, and earnings retained in the business. The total value-added concept also included depreciation, but this is a gross product concept rather than a net income concept.

The position of retained earnings in the enterprise theory is similar to its position in the entity concept. It either represents part of the equity of the residual equity holders or it represents undistributed equity—the equity of the company in itself. In entity theory there is considerable merit in the former position; but in the enterprise theory the earnings reinvested do not necessarily benefit only the residual equity holders. Capital employed to maintain market position, to improve productivity, or to promote general expansion may not necessarily benefit only the shareholders. In fact, it is possible that the shareholders may not be benefited at all if future dividends are not increased.

In conclusion, it can be said that the different equity theories (approaches) are found to be relevant under different circumstances of organization, economic relationships, and accounting objectives. Therefore, accounting theory and practice should take an eclectic approach to these theories. All help to explain and understand accounting theory and to develop logical patterns for the extension of theory. However, care must be taken to apply the most logical equity theory in each case and to use a single theory consistently in the similar situation. It is not inconsistent to apply the proprietary concept to a small single proprietorship, the entity concept to a small single proprietorship, the entity concept to a medium size concern and the enterprise theory to a very large company. Hendriksen observes:

"Each of the several equity theories interprets the economic position of the enterprise in a different way and thus presents a different emphasis on the method of disclosure of the interest of the several equity holders or interested

groups. They also lead to different concepts of income or different methods of disclosing the equity interests in the income of the enterprise. There is also some evidence that the proprietary concept requires an emphasis on current valuations of assets, the entity and funds theories are neutral with respect to asset valuation, and the enterprise theory emphasized the need for a market output valuation concept. However, the associated valuation method and the associated concept of income are primarily the result of the way the several concepts have been developed. The problem of valuation and the most relevant concept of income are basically independent of the equity theory selected. The main questions raised by the several equity concepts are related to these questions:

- (1) Who are the beneficiaries of net income?
- (2) How should the equity relationships be shown in the financial statements? These questions are closely related to the objectives of accounting."

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CHAPTER-9

Depreciation Accounting and Policy

The most serious difficulty with depreciation is that no allocation method is fully defensible. That is, it is not possible to defend one allocation method as being superior to all others. An additional difficulty is that before a pattern or formula for allocation the original or restated valuation (less scrap value) to expense or production costs can be applied certain estimates must be made, including the following: (1) the valuation (cost or other basis) of the asset when acquired or a restatement of this at a subsequent date, (2) the expected service life of the asset, and (3) the scrap value or liquidation value at the end of the service life. The last two (and in some cases the first) of these are ex ante measurement of uncertain future values. Although the estimates may be based on multiple probabilities, their reduction to single values is at best a difficult problem. The conventional application of depreciation methods, however, is static because it generally assumes that these estimates remain constant over time. Therefore, because of the difficulties involved in making these estimates (particularly where the uncertainties are high) and because of the failure to make adjustments over time, it is possible that no allocation procedure, even if it could be logically defended, would be relevant for income reporting.

Regardless of the above difficulties, researchers and writers on the subject of depreciation frequently attempt to defend depreciation procedures on the basis of economic interpretation or on behavioral grounds, primarily relating to the relevance of the depreciation figures for decision making. Real-world interpretation is frequently assumed to be derived from the following general concepts: (1) a measurement of the decline in the value of the asset (restated for general or specific price changes) is assumed to represent depreciation, and (2) depreciation is assumed to be an allocation of the cost or other basis according to the benefits expected to be received in each period. Attempts to defend depreciation on behavioral grounds include estimation theory and purpose utility. This chapter evaluates the assumed logic of alternative depreciation methods and determines to what extent if at all, the alternative methods are defensible. If, all allocation methods are arbitrary and do not result in measurements that can be defended within reasonable limits, depreciation should be abandoned, and alternative reporting methods should be substituted.

DEFINITIONS OF DEPRECIATION

The most commonly accepted definition of *depreciation* is that it is a systematic and rational method of allocation costs to periods in which benefits are received. Notice that this definition is a static concept. The initial cost or other value is not changed during the life of the asset; the sum of all depreciation charges is equal to the initial value less any salvage value. The definition does not suggest how the cost or other value should be distributed; it is sufficient that the allocation procedure be systematic and rational. The requirement that it be rational probably means that it should be reasonably related to the expected benefits in each case.

Statement of Financial Accounting Concepts No. 3 attempts to give semantic interpretation to the term *depreciation* by stating that wear and tear from use is a major cause of depreciation. It states further, however, that wear and tear cannot normally be measured and that usually there is no traceable relationship between the allocations and specific revenues or the periods to which they are charged. *Depreciation* is, therefore, defined as the systematic and rational allocation of costs to periods in which the assets are assumed to be used. However, the causal relationship cannot be specifically identified and the relationship to benefits is only indirect. The possible semantic interpretation of depreciation and the possible relationships to benefits are discussed in the following paragraphs.

Decline in service potential

The American Accounting Association Committee on Concepts and Standards definition of *depreciation* leads to the same conclusions as the FASB definition, but it is based on a measure of asset valuation (the service potential), rather than on an allocation of cost. The Committee asserted that depreciation

represents the decline in service potential of long-term assets and that the decline in service potential may be the result of physical deterioration, consumption through use, or loss in economic value because of obsolescence or change in demand. Under this definition, the initial cost of an asset is assumed to represent the value of a storehouse of services that can be released over the life of the asset. Whenever a portion of these services expires through use or other cause, the quantity of service potential declines; and a portion of the cost of the asset should be transferred to an expense, another asset, or a loss account. This definition is also a static concept because it is based on an allocation of cost to each quantity of potential service of the asset. But it is less static than the FASB definition because it recognizes that the loss in service potential may be irregular and may be subject to many factors that cannot be foreseen when the asset is acquired. The FASB definition assumes that the conditions anticipated at the time of acquisition will continue without material change over the expected life of the asset. However, both definitions are based on single-valued expectations regarding the total expected quantity of potential service or the expected life of the asset.

The AAA Committee on Concepts and Standards – Long-Lived Assets also defined the term as an expiration of service potential of the asset. But the committee stated further that “depreciation must be based on the current cost of restoring the service potential consumed during the period.” This definition is based on a decline in the value (the service potential) of the asset, but it is also related to the capital maintenance concept.

The maintenance of capital

A broader concept of depreciation is that income emerges only if the invested capital at the end of a period exceeds the invested capital at the beginning (assuming no capital transactions or dividend payments during the period). The definitions of the FASB, the AAA statement, and the AAA committee all apply the maintenance concept, but the concept of capital to be maintained is slightly different in each case. Under the FASB definition, it is the original monetary investment that should be maintained (financial capital maintenance) at least by the end of the asset's life; recovery of original cost may be assumed to occur gradually over the life of the asset in any rational manner. The AAA definition assumes that it is the service potential or its equivalent in terms of the original cost of services used that should be maintained. The AAA committee definition emphasizes the maintenance of operating capacity or physical capital maintenance. In none of the cases, however, is it necessary that actual replacement or equivalent replacement be made; the failure to maintain physical capital or dollar capital because of a loss or for other reasons does not deny the existence of the depreciation.

The advantage of the capital maintenance concept is that it permits the recognition of changes in the value of the dollar and changes in specific replacement values. The capital to be maintained can be interpreted to be the original investment expressed in terms of a common dollar, or it can be expressed in terms of the current replacement values at the beginning or end of the accounting period.

The main disadvantage of the capital maintenance concept is that it results in a failure to permit a separation of operating income from extraordinary gains and losses. Unless other criteria are introduced, it does not provide a basis for determining the normal operating depreciation separately from the abnormal losses of service potential. Also, it requires a further definition of what is meant by capital maintenance. Therefore, it is not a precise definition that can be used as a specific guide; rather, it is only a broad guide subject to further interpretation.

The current cost of services consumed

The FASB definition of depreciation is similar to the definition suggested by Sprouse and Moonitz in *AICPA Accounting Research Study No. 3*, but the latter suggested that current replacement costs are more significant than historical costs, particularly when some significant event occurs in the organization of the firm. Depreciation is assumed to represent an allocation of current costs, and the depreciation charge for a specific period is the current cost of the services consumed in that period.

The Advantages and disadvantages of current costs are discussed in Chapter of Accounting for Price level changes. However, it should be kept in mind that nonmonetary assets by their very nature represent large blocks of potential services. The use of current costs does not alleviate the problem of making allocations to specific periods.

CONCEPTS OF DEPRECIATION

The definition of *depreciation* as a systematic and rational allocation of costs is a syntactical definition only. Attempts to give semantic interpretation to the word have either attempted to explain it in terms of its *causes* or in terms of the *benefits*. The cause is usually specified as decline in asset value resulting from wear and tear and a obsolescence of an asset on its "irresistible march to the junk heap". The benefit is usually discussed in terms of the association of the use of the asset with cash flows or net revenue contributions. A behavioral approach has also been suggested which stresses the usefulness of the reported allocations.

By far the most common basis used in attempts to defend alternative depreciation concepts under all three approaches is the distribution of benefits expected to be received by using an asset over time (its net revenue contribution each period). However, the determination of net revenue contributions is the result of two allocation processes. First, the total revenues of the firm must be allocated to specific periods of time. Second, the total revenues of each period must be allocated to specific assets or asset classes. But it is rarely possible to measure either the *ex ante* or *ex post* net revenue contributions in the several periods during the use of an asset because of the many interactions of the production functions or inputs in the production and other operating processes of a firm. Most defenses of depreciation methods merely assume the plausibility of certain patterns and amounts of net revenue contributions. The association of these net revenue contributions of real-world observations has been made only in very general terms or indirectly by observing market prices of used assets.

The support for depreciation methods based upon the net revenue contribution concept is usually couched in terms of the capital budgeting solution for the evaluation and selection of investment projects. The capital budgeting solution, however, generally requires the estimation of marginal cash flows to be received each period from making the investment compared with the alternative of not investing. If several investments in different assets or asset groups are to be made simultaneously, the marginal contributions must be made sequentially, although the amount and distribution of the contributions may depend upon the order in which they are selected. The expected cash flow contributions may result from expected increases in total revenues of the firm or from expected cost savings, such as decreases in labor or fuel costs, or they may represent a combination of expected revenue increases and cost savings. When allocations are proposed on the basis of matching cost or other valuations of the assets with expected benefits, the expected effect on cash flows must be adjusted to the accrual basis, so that depreciation will be allocated on the basis of the periods in which the expected increased revenues or cost savings will be reported in the income statement. Thus, in these cases, the term *net revenue contribution* is more appropriate than the cash flow concepts applied in capital budgeting solutions.

Although most of depreciation concepts proposed are based in some way upon the expected net revenue contribution of the specific items of plant and equipment, they can be classified generally as concepts that either (1) measure depreciation as the decline in the value of the asset or (2) measure the amount of cost (or other basis) to be allocated to each period on the assumption that there is a matching of the input values with the expected revenues or net revenue contribution. The decline in the value of the asset may be measured in terms of the discounted value of the expected benefits or in terms of the liquidation value (exchange price) at the end of each period. The matching process may be obtained by assuming a constant internal rate of return on the investment or by assuming a constant ratio of the input value of the services assumed to be used to the expected net revenue contribution in each period. However, the matching may also be attained indirectly by associating the cost with the services of the asset or with some other intermediate stage rather than directly with the net revenue contribution.

Decline in asset value – a cause of depreciation

The AAA committee on concepts and standards referred to depreciation as the decline in service potential, and the AAA committee on long-lived assets referred to it as the expiration of service potential. Since a measure of service potential is a measurement of the value of an asset, both of these definitions can be classified as measuring depreciation in each period by computing the decline in the value of the asset during the period.

Decline in discounted net revenue contribution. The service potential of a durable asset at any time

can be measured by discounting the expected cash flows (or expected cash savings) to be obtained from acquiring and using the asset. Assume, for example, that an asset is expected to generate cash savings over a five-year period in the amounts of 500, 600, 1000, 400 and 500, respectively, with the scrap value include in the final amount. The formula for computing the present value at time t_0 is as follows :

$$V_0 = \sum_{t=1}^n \frac{R_t}{(1+r)^t} \quad \dots(1)$$

Where :

V_0 = The present value at time 0.

R_t = The cash flow in each period (t).

r = The opportunity rate of return or the cost of capital.

If r is assumed to be the opportunity rate of return for a riskless investment, the discounted cash flow for each period should be adjusted by a risk preference factor. However, in much of the literature, r is assumed to represent the cost of capital. The limitations of these assumptions are also discussed in this book elsewhere.

The present value at time t_1 is computed by following formula :

$$V_1 = \sum_{t=2}^n \frac{R_t}{(1+r)^{t-1}} \quad \dots(2)$$

Depreciation (D_1) for the first year is computed as follows:

$$D_1 = V_0 - V_1 \quad \dots(3)$$

The depreciation for the above example would then be computed as indicated in Table 9.1.

TABLE 9.1 : Computation of depreciation based on the decrease in the discounted value of the expected cash flows (cost of capital is assumed to be 8 percent)

Year	(1) Expected net cash flow benefit (Rs.)	(2) Present value at beginning of year (Rs.)	(3) Present value at end of year (Rs.)	(4) Depreciation (col. 2 - col 3) (Rs.)
1.....	500	2,406	2,099	307
2.....	600	2,099	1,667	432
3.....	1,000	1,667	800	867
4.....	400	800	464	336
5.....	500	464	0	464

The present value for the beginning of year 1 is computed as follows:

	Rs.
$500 \times 0.9259 =$	463
$600 \times 0.8573 =$	515
$1,000 \times 0.7938 =$	794
$400 \times 0.7350 =$	294
$500 \times 0.6806 =$	340

Rs.	2,406

If, in the above example, the cost of the asset was 2,025, an initial gain of 381 would need to be recorded in order to depreciate the beginning value of 2,406 over the life of the asset. An alternative would be to allocate the 381 gain over the life of the asset in proportion to the expected cash flow benefits or according to some other method; however, such an allocation would be purely arbitrary and would find acceptance only because it appears to be in accordance with the conventional realization rules. If the cash benefit of 500 in the fifth year includes a final scrap value of say, 100, this 100 should be subtracted from the depreciation in the fifth year, making that amount 364.

One of the disadvantages of computing the depreciation on the basis of the decline in the discounted service potential or the discounted expected cash flows is that it is static in nature. The cost of capital at the date of acquisition and the expectations regarding the amount and timing of cash benefits are assumed to be constant over the life of the asset. Although it is possible to compute a new value for the asset each period on the basis of the current cost of capital and new expectations regarding expected benefits, such revaluations would be of doubtful validity, primarily because once the asset is acquired it becomes a part of the total operating facilities and its marginal benefits can no longer be measured because of the interaction of all of the factors of production in generating the net revenue of the firm. Therefore, a separate value for each asset cannot be obtained after the date of acquisition. In addition, reporting the gain at the date of acquisition is of doubtful relevance in the decision processes of investors and creditors, because it is subjective in nature and bears little relationship to the valuation of the enterprise as a whole.

Decrease in resale price of used asset : An alternative to the measurement of depreciation in terms of the decline in the discounted expected values of an asset is the use of current market prices. In this proposal, depreciation is the decline in the current market price of the asset measured by the resale price in a secondhand market. The main advantage of this procedure is that it avoids the need to make allocations and to rely on subjective expectations. However, it too has some major disadvantages. In the case of nonvendible durables, the entire asset must be written off at the date of acquisition or some amortization procedure must be used as a substitute. In this case allocation is not avoided, since the charge of the entire amount to one period is still an allocation. Another disadvantage of the use of current market prices for durable assets is that there is no evidence that the current resale prices are relevant to any of the prediction or decision models of investors and creditors or other external users of financial statements. The resale price does not necessarily represent what the firm would pay for the asset if it did not own it since the policy of the firm may be to acquire assets only in larger lots—that is, new.

The current exit-value models of Chambers and Sterling suggest the use of current exit values that are allocation free. However, the decline in these values over time should not be interpreted as depreciation in the usual sense. The objective of using current exit values is to report the firm's present position and the consequences of its past actions as reflected in purchasing power.

Depreciation as a process of matching costs with expected benefits

In most discussions of depreciation allocations, there is an assumption explicit or implicit, that the amount of the cost or other basis of the asset allocated to each period should represent the amount that is being matched with the expected revenues or net revenue contribution of the period. This matching of the input valuation with the expected benefits can take the form of (1) time-adjusted depreciation, which uses an average internal rate of return during the entire life of the asset, (2) depreciation allocations that are proportional to the net revenue contributions of each period, and (3) depreciation allocations that are in the same relative proportion as a surrogate for net revenue contributions, such as a measure of the service provided by the asset.

Time-adjusted depreciation : By equating the historical cost (or other input valuation) with the present

value of the asset in equation (1) above, and by substituting the internal rate of return for the opportunity rate or the cost of capital, we obtain the following equation :

$$C = \sum_{t=1}^n \frac{R_t}{(1+s)^t} \quad \dots(4)$$

Where :

C = The cost of the asset.

s = the internal rate of return

By subtracting C from each side of the equation, we obtain :

$$\sum_{t=1}^n \frac{R_t}{(1+s)^t} - C = 0 \quad \dots(5)$$

Or, by summing the individual terms :

$$\left[\frac{R_1}{(1+s)^1} + \frac{R_2}{(1+s)^2} \dots + \frac{R_n}{(1+s)^n} \right] - C = 0 \quad \dots(6)$$

If we use the above example, the cost (C) is 2,025, and the net revenue contributions (R₁, R₂, etc.) for each of the five years are 500, 600, 1,000, 400, and 500, respectively. By substituting these values in equation 6, we can solve for the internal rate of return (s). In this example, the internal rate of return is 15 percent. By assuming that this is a constant rate during the life of the asset, the depreciation for each year can be computed as indicated in Table 9.2.

An advantage of this concept of depreciation is that depreciation represents an allocation of the total input cost, although the input value

TABLE 9.2 : Computation of depreciation based on the net revenue contribution less the associated earnings on the investment at a 15 percent earning rate

	(1)	(2)	(3)	(4)
Year	Investment book value at beginning of year (Rs.)	Associated earnings at 15% (Rs.)	Net revenue contribution (Rs.)	Depreciation (col. 3 - col. 2) (Rs.)
1.....	2,025	304	500	196
2.....	1,829	274	600	326
3.....	1,503	225	1,000	775
4.....	727	109	400	291
5.....	435	63*	500	437
				2,025

* Adjusted for rounding error

may be expressed in terms of historical cost, cost adjusted for changes in the price level, or current costs. It also may have an advantage in permitting a prediction of future incomes, because it uses a constant average rate of return; however, predictability depends upon the relationship between expected net revenue contributions and actual contributions and upon whether or not the firm is able to reinvest continually in new projects at the same internal rate of earnings.

Disadvantages of the time-adjusted rate of return concept are these: (1) it assumes that the rate of return

is constant over the life of the asset; (2) like the decrease in value concept, it is static in nature; (3) when the net revenue contribution is less than the associated earnings in any year, the depreciation would be negative; (4) if the expected net revenue contribution is negative in any one or more years, the solution of the discounting equation may result in multiple rates or return; and (5) like other concepts relying on expected net revenue contribution values, its validity is factors contributing to the total revenues of the firm.

Depreciation based on a constant cost to net revenue contribution ratio. Depreciation, in this concept, is assumed to represent an allocation of the original cost (or other basis) to each year in such a way that it is matched with the associated net revenue contribution of each year on the basis of a constant ratio. The ratio is computed by dividing the historical cost of the asset (less scrap value if any) by the total expected net revenue contribution during the life of the asset. The depreciation for each year is, therefore, the expected net revenue contribution for that year multiplied by this ratio. The ratio can be computed by the following formula :

$$m = \frac{C}{\sum_{t=1}^n R_t} \quad \dots(7)$$

Where :

M = The ratio of historical cost to the total expected net revenue contribution.

C = The cost or other basis (less scrap value) of the asset.

R_t = The expected net revenue contribution in each year (t) during the life of the asset.

Depreciation in each year can be computed as follows:

$$D_t = mR_t$$

Where D_t is the depreciation allocated to year t .

Using the same figures as in the previous example, the cost of the asset is assumed to be 2,025, and the net revenue contributions are expected to be 500, 600, 1,000, 400, and 500, respectively, for each of the five years. Assuming no scrap value, the ratio would be 0.675 (computed by dividing 2,025 by 3,000). The depreciation for each of the five years would be as shown in Table 9.3.

TABLE 9.3: Computation of depreciation based on a constant ratio of cost to expected net revenue contribution

Year	(1) Expected net revenue contribution	(2) Ratio	(3) Depreciation
1.....	500	0.675	338
2.....	600	0.675	405
3.....	1,000	0.675	675
4.....	400	0.675	270
5.....	500	0.675	337
	<u>3,000</u>		<u>2,025</u>

An advantage of this depreciation concept is that it avoids the difficulties of computing an average internal rate of return when there are possible multiple rates, and it avoids the possibility of negative depreciation figures (unless the expected net revenue contribution in any year is negative.) an additional advantage is that it may avoid many of the interactions among factor inputs by using a ratio computed from the net contribution (total expected revenues less variable costs) and total costs for aggregations of assets such

as an entire plant, although this may be only a rough guide and the logic of applying a single ratio to all assets may be vary indirect indeed. But for an asset such as a hotel, for example, the revenues may be greater when it is new and has prestige status than when it is old. It may eventually be converted into an office building and provide an entirely different type of service with lower revenues. If variable costs can also be estimated, the net revenue contributions from the entire hotel may be used as a rough guide for the allocation of all specific assets associated with the net revenues from operating the hotel. It is also possible to recompute the net revenue contribution pattern expected for the remaining life of the asset at any time during its life. So that the actual ratios used in computing the depreciation may come close to the final *ex post* ratio. To this extent, it may be possible for external users of financial statements to predict future relationships, but this is so only if the ratio of cost to net revenue contributions is relatively constant for additional investments by the firm.

One of the disadvantages of this concept is that it may cause the rates or return on invested assets to vary widely because it does not adjust for the timing of the net revenue contributions. Interactions among the several assets and other factors used by the firm are not eliminated even if the ratios are computed from groups of assets. Other disadvantages of this concept are similar to the disadvantages of other concepts discussed previously that are also based on expectations of net revenue contributions.

Depreciation as an allocation of cost to physical service units : As an alternative to basing depreciation allocations on the pattern of expected net revenue contributions, it is possible to substitute a physical measure of the expected services to be obtained by using the assets. A nonmonetary measure of the benefits expected to be received is substituted for the dollar measurement of the net revenue contribution. Examples of such surrogates would include the number of units produced, number of hours, days or months of operation, kilowatt hours of electric power produced, or some other intermediate unit of production input or output. The pattern can be either an expected distribution determined in advance or the allocation of a predetermined cost per unit to the actual number of service units used in any accounting period.

A major question that arises, therefore, is whether the total costs should be allocated over all potential services or over just the services that the firm anticipates using in operations. An asset is usually acquired with certain services in mind, and it is logical to allocate the initial input cost less salvage, if any, over the period of anticipated use. For example, a crane could be acquired for use on a specific contract. Its total cost less salvage should be assigned to the specific contract, even though it is used for only a few days and remain idle for long periods of time. If this is the most economical way of getting the job done, there is no reason why the total cost should not be assigned to the anticipated use. But this is not inconsistent with the net-revenue-contribution concept. In other cases, an asset may be acquired with an anticipation of using it only 3 or 4 years out of 10. If it is not feasible to utilize the services in all years, there is logic in charging depreciation only in the years of anticipated use. It was for this purpose that the asset was acquired, and to insist on depreciation in every year is not consistent with the pattern of expected benefits. On the other hand, however, if an asset is acquired for use and forced to remain idle for one of many reasons, depreciation should be recorded if the service units expected to be obtained during the period of idleness cannot be obtained in a later period. A charge for the services expired should be made even though they serve no benefit to the firm; however, they may be shown as a loss rather than as a charge to current operations.

An advantage of using this indirect measure of the net revenue contribution is that the allocation can be adapted to unanticipated changes in the pattern of use, particularly in those cases where the decline in the expected future benefits is more closely related to use than to obsolescence and the passage of time. A disadvantage of the physical services method of allocating asset costs is that there may not be any necessary relationship between the physical services produced or consumed and the net revenue contributions from the asset. Therefore, the allocations may result in capricious charges to income, which are not likely to be relevant to the predictions and decisions of investors and other external users of financial reports. Furthermore, both the choice of a measure of the physical service of the asset and the allocation of cost to each service unit are likely to be based upon expediency rather than logic. The service unit is likely to

be some measure that is readily available, such as direct labor hours or units of production, and each unit of such service is usually assumed to provide an equal benefit value or net revenue contribution. Different costs can be assigned to different service units, but it is seldom possible to do so in a logical manner except by resorting to an alternative cost of obtaining the same services or by making expectations regarding changes in total revenues. It is generally difficult to take into account changes in variable costs or cost savings.

Depreciation allocations based on the usefulness of the reported figures

Because of the theoretical and practical limitations of all of the allocation concepts discussed above, a possible alternative might be to evaluate the results, rather than the allocation concepts. If allocation procedures can be found that permit good predictions or otherwise provide information useful to investors and creditors, they would appear to be acceptable regardless of how arbitrary they might seem to be from a theoretical point of view. Such solutions, however, cannot be evaluated by deductive reasoning alone; they must meet the tests of rigorous empirical research. As a starting point, the solutions to the above example using three of the concepts discussed above are presented in Table 4, which also compares the rates of return on invested book value of the asset in each case with the ratio of depreciation to net revenue contributions.

As Table 9.4 indicates, the rates of return for the decline in value concept and the time-adjusted concept are both constant and would be useful in making predictions of future rates if the firm is likely to continue to earn these rates. The 8 percent rate, however, is a minimum rate, because it can be assumed that the firm would not invest in assets that yielded less than this. But the 15 percent may not be typical of investment opportunities available to the firm. The third concept results in rates of return for each year that vary from 8 percent to 48 percent. Therefore, this example suggests that none of these three methods is necessarily valid in permitting prediction of future rates of return; but empirical studies could prove otherwise, particularly under different conditions or assumptions.

An attempt to develop a complete theory relating to the prediction of cash flows but using the traditional accounting framework is estimation theory. In this theory, either the total future cash flows of the firm or the long-run internal rate of return are assumed to be capable of estimation from annual reports of income designed for this purpose. The current ratio of the contribution less depreciation to the contribution is computed in such a way that it permits an estimation of the ratio of the total cash flows less cost to the total cash flows. Since the presentation of a probability distribution of future cash flows is not acceptable in current accounting practice, this information is presented indirectly by computing depreciation in such a way that the *ex post* ratios used approximate the *ex ante* long-run ratios. In a similar fashion, the depreciation can be computed on the basis of an estimated rate of return that approximates the *ex ante* long-run rate of return. One difficulty with this theory is that it is based on an assumption regarding what parameters the investor or creditor wishes to use in the decision models. Furthermore, as can be seen from Table 9.4, rates of return and ratios of depreciation to contribution may vary depending on the method used. An investor who is not told what rates of return or ratios are being used may be deceived into attempting to estimate one of these when, in fact, the other is parameter assumed to be constant.

Only the third concept results in a constant ratio of depreciation to the expected net contributions, and thus a constant ratio of the contribution less the depreciation to the contribution, because one is the complement of the other. In the third concept of Table 9.4. The former ratio is 0.675 and the latter is 0.325. the other two concepts result in widely varying ratios. Therefore, only the third concept is likely to permit any prediction but such a prediction depends on the likelihood of this ratio being relatively constant for all investments, in the future. Although this is subject to empirical verification, an a priori answer would be that this is not likely to be the case because it would assume constant production functions and relatively constant capital intensity, neither of which is likely to be true because they would exist only under static conditions.

The net service contribution

In the above example, it was assumed that the net contribution of the asset could be estimated at the time of acquisition and that the pattern of contributions over the life of the asset would serve as a basis for the depreciation allocation. As in a capital budgeting decision, the expected net contribution of the asset should take into consideration its effect on the additional costs or cost savings as well as its effect on revenues.

However, once the asset has been installed, it becomes a part of the entire operation, and the additional revenues and net cost savings can no longer be attributed to the one asset alone. All of the assets and other factors of production interact in producing the revenue of the firm. Therefore, it would be necessary to make a simultaneous allocation of the revenues of the firm to all of the assets. But simultaneous allocations of revenue or net revenue contributions cannot be supported on theoretical grounds unless the firm's inputs do not interact, a condition that is highly unlikely."

Even when able to predict the net revenue contributions using the capital budgeting techniques, the accountant is plagued by other problems. The total cost of obtaining the net benefits from an asset includes not only the initial cost of acquiring the plant or equipment, but also the costs of repairs and maintenance over the life of the asset. But the policy of the firm with respect to repairs and maintenance and improvements will affect the associated labor and power costs as well as the operating efficiency. Therefore, the initial cost is only one of the input factors that should be considered in the basic allocation problem.

The main disadvantage of attempting to allocate total expected operating costs is that new uncertainties are introduced into a problem that is already complex, when a new asset is acquired, it may be almost impossible to estimate the total repair, maintenance, and operating costs and their interrelationships. In some cases, operating costs may decline over a lengthy break-in period. Repair and maintenance costs may increase over the entire life of the asset, or over only a part of the life to prevent other operating costs from increasing even more rapidly. These interrelationships and their influence on decisions regarding the choice of a depreciation method are discussed in the following section.

DEPRECIATION, REPAIRS, AND REPLACEMENTS

The objective of considering all expected operating costs as well as operating revenues in the computation of depreciation allocations stems from the fact that repairs, maintenance, and other operating costs are interrelated. This interrelationship was referred to in the previous chapter in the discussion of capital and revenue expenditures. But the extent of the interrelationship and the effect on depreciation allocations require closer scrutiny. First, the expected life of an asset is directly associated with the extent of the anticipated repairs and maintenance. Second, because most assets include many components with different lives, many so-called repairs are really replacements. Third, the efficiency of an asset frequently declines as an asset ages, and this decline in efficiency accelerates when repairs and maintenance are curtailed or delayed.

Repairs, maintenance, and asset life

The life of an asset can be extended or shortened by varying the amount of repairs and maintenance. In some cases, assets can be preserved almost indefinitely for historical or cultural reasons. But the cost of doing so is generally greater than the cost of replacement with a new asset. Furthermore, obsolescence usually makes such continued maintenance uneconomical. On the other hand, repair and maintenance costs can be reduced to a minimum whenever the economic life of an asset is expected to be quite short. For example, if specialized equipment is to be used for the completion of a specific contract and abandoned upon the termination of the contract, the most economical level of repair and maintenance expenditures would be that minimum necessary to keep the equipment operating only until the completion of the contract. Usually, the life of an asset is determined by what may be considered an optimum level of repair and maintenance expenditures or by economic obsolescence, whichever is the shorter. If repair or maintenance expenditures are delayed or curtailed for any reason below that required to obtain the expected economic life of the asset, the current depreciation allocation should be increased accordingly.

Repairs and replacements : The term *maintenance* generally refers to the normal upkeep of property in an efficient operating condition. Maintenance is frequently considered to include normal recurring repairs, and the term *repair* refers to the restoration of an asset without increasing its expected service life or capacity. However, repairs may be of two general types : (1) the adjustment of a machine or working parts and the labor necessary to restore a damaged or worn component to its original condition and (2) the replacement of one or more parts of an asset with new parts without replacing the entire asset.

Maintenance expenses and repairs of the first type may increase over the life of an asset because of the increasing need for adjustment and care when items of plant and equipment become worn through use or

age. If the revenue contribution of the asset remains the same throughout its life while the repair and maintenance expenses increase, the net contribution of the asset itself must be decreasing. This factor by itself, calls for a declining depreciation charge.

The replacement of specific parts, however, is a function of the unit or composite selected for depreciation, and the distinction between replacements, and maintenance is dependent upon the amount of the aggregation and the selected composite life. If each component is depreciated separately on the basis of its own expected life, the replacement requires the retirement of the component and the setting up of a new component in its place. For example, if the tires on an automobile are depreciated separately, they would be depreciated over their individual expected lives and written off when they are replaced; the new tires would then be capitalized and depreciated over their expected lives. Truck tires are occasionally treated in this fashion, but it is not common to identify and depreciate other parts of a truck or automobile separately. Usually, an item of equipment or a building is treated as a single asset and assigned a life based on the expected life of the major components. If the original cost of the asset is allocated over the life of the major components, some consideration must be made for the fact that minor components will be replaced before the anticipated retirement of the entire asset. If some of the parts are replaced every year or two and if others are replaced at longer intervals, there will be a bunching of replacements in the later years of the asset's life. This results in increasing repair expenses as the asset ages. The charging of the cost of all parts over the entire life, with the charging of the costs of replacements to expense in the year that they occur, results in double charges in later years and inadequate charges in the early years. Therefore, the allocation procedure should be adjusted so that this double charging can be avoided.

Accountants have occasionally recommended that repair costs should be equalized over the life of an asset by setting up a budgetary reserve. The need for this allocation or equalization of repair costs is based on the assumption that the annual depreciation charge represents an allocation of only the original cost of the asset, without regard to the timing of repairs. The recommendation usually requires an estimation of the total repair costs during the life of the asset and an allocation to each period by setting up an allowance or reserve for repairs. This allowance account is usually classified as a liability reserve. However, it does not have the usual characteristics of a liability because it is based on the occurrence of a future event. A better alternative would be to treat it as a contra to the related asset account, similar to the treatment of accumulated depreciation. This treatment is more logical because it represents an additional allocation of costs of the parts with lives shorter than that of the major components. Therefore, it is depreciation and could just as well be credited to the accumulated depreciation account. When repairs are actually incurred, they would be debited to the allowance for repairs account or the accumulated depreciation account. This procedure is therefore similar to the treatment of major repairs. Although it would be more precise to write off an asset and capitalize the repair costs, it is usually too difficult to determine the cost of the item being replaced. But this procedure also has the same limitations as the similar method suggested for handling major repairs.

Repairs and efficiency : Repairs and maintenance can frequently be delayed or minimized, with the result that other operating expenses, such as fuel and labor costs, may increase. Thus, if the value of the output of the asset remains constant, the net contribution of the asset declines. This decline in net contribution also occurs as a result of frequent repairs as the asset grows older; the frequent repairs curtail the time available for production or use and thus diminish the output of the equipment. The several concepts of depreciation based on the net revenue contribution require that this decline in output potential be taken into consideration in the allocation process.

EVALUATION OF VARIOUS DEPRECIATION METHODS

Accountants have long recognized that plant and equipment have limited lives and that some consideration must be made in the accounts for the inevitable necessity to junk productive assets. During the 19th century and the early part of the 20th century, many of the firms that treated the problem at all did so by a periodic revaluation of the assets or by charging either replacements, or retirements to current expense. More recently, depreciation has become recognized as a systematic allocation of cost or other value over the life of the asset. Many methods of allocation have been proposed and used, but practically all of the methods can be

classified according to which of the following patterns they resemble: (1) allocations varying according to activity or use, (2) straight-line or constant charge methods, (3) increasing charge methods, and (4) decreasing charge methods.

Methods preceding the use of cost allocation

Although the methods preceding the use of cost allocation are not based on good accounting theory, a brief review is helpful in placing them in proper perspective and in recognizing them when they appear in current discussions of accounting theory and practice.

Inventory method : Probably the earliest method of recognizing depreciation was to revalue the assets periodically or at the termination of a venture. The inventory valuation was based on either the valuation of the asset to the new venture or on the cost of the asset adjusted for any loss in productive efficiency. The first basis may be determined by a liquidation value or by a current market price. The second valuation basis results in what is called observed depreciation, which is based on the change in engineering efficiency of the asset rather than on the decline in service potential.

The use of a liquidation value or current market price is advantageous because it permits a real-world interpretation and avoids the necessity for arbitrary allocations. However, the decline in these prices does not represent what is normally thought of as depreciation because it includes gains and losses due to market factors. The use of observed depreciation is usually thought to be inadequate because it does not take into consideration such economic factors as obsolescence.

Although the inventory method is obsolete, it is occasionally applied in one of several forms as an expedient. For example, an inventory of small tools is occasionally taken at the end of each period and valued on the basis of its physical condition; the depreciation expense is computed by subtracting this inventory valuation from the sum of the beginning inventory and the cost of tools acquired during the period.

The replacement method : When a firm had a large number of similar assets, it was thought that the current cost of using plant and equipment could be approximated best by charging to depreciation expense the cost of current replacements. In a large mature firm, replacements were thought to occur regularly and provide a good substitute for depreciation charges. The cost of the original asset was retained at the book value of the asset in use regardless of the change in costs at the time of replacement. A modification of this method required the use of a reserve account and a periodic charge to depreciation during the early years of the life of the enterprise until replacements reached a relatively constant level.

The replacement method is generally considered obsolete, but it is still used by railroads for ties, rails, tie plates, and ballast. Its current counterpart in general financial accounting is the charging of ordinary repairs to expense as they occur, while continuing to carry the original cost of the replaced parts in the total cost of the main asset.

Cost allocation methods

In accordance with the various objectives of depreciation the cost or other value of an asset should be allocated over the service life in a systematic and rational pattern. The method selected for any specific asset or group of assets should reflect the specific expectations regarding the following factors: (1) the relationship between decline in market value and use, (2) the effect of obsolescence, (3) the expected pattern of repairs and maintenances, (4) the anticipated decline in operating efficiency, (5) expected changes in revenues, (6) the long life of assets and the necessity for waiting – the interest factor, and (7) the degree of the uncertainty regarding the later periods of the asset's life.

Theoretically, the selection of a depreciation pattern should be based on all of the above listed factors. However, in many cases, one or a few of the factors will dominate and the minor effects of the others may be ignored. Usually, one of several established depreciation methods is selected if the general pattern appears reasonable or if income tax effects are permitted to influence the selection of the method chosen for accounting purposes. Although there is some merit in using standardized methods, it would be possible to combine the expectations of the several determining factors and derive a mathematical equation for each asset or group of assets. Such equations derived from past experience and from specific expectations might provide more useful information under estimation theory than the common practice of fitting a standard model to each situation.

Variable charge methods : The activity or use methods of depreciation are based on the assumption that depreciation is a variable rather than a fixed cost. That is, it is assumed that the value of the asset declines as a function of use rather than because of the passing of time. For example, a truck may be expected to operate for 100,000 miles during its lifetime, or a machine may be expected to operate for a given number of hours or turn out a given number of units of product.

For many types of assets, the assumption of a variable depreciation is reasonable, particularly if the physical wear and tear are more important than economic obsolescence or if the expected services can normally be expected to be obtained before obsolescence sets in. Accordingly, if an asset's services are not used in one year, no depreciation should be recorded because there is no decline in service value. This is similar to a coal pile; if no coal is used while the plant is shut down temporarily, no charge is made for coal during that period. Even though obsolescence may be a significant factor in determining the expected life of an asset, the activity method of depreciation may be appropriate if the obsolescence can be anticipated and if an estimate can be made of the approximate usage to be obtained from the asset. Under these conditions, the cost of the asset can be assumed to represent the purchase of a given number of service units, and the allocation of the cost to these units is then reasonable. The main objective of depreciation applied in this case is the allocation of input value to each service unit; the measurement of the decline in service value may be of secondary importance.

The production method of depreciation appears to be ideal for those situations where the service value of the asset declines with use, but there are some serious disadvantages to the method as it is usually applied: (1) Although a variable charge to each year is accepted, the production method is similar to the straight-line method in the sense that it assigns an *equal* amount to each unit of service, but there is no basis for assuming equal costs per unit of service. Furthermore, because of the necessity of waiting for the later units of service, the total service value does not, in fact decline uniformly unless interest is assumed to be zero. (2) No consideration is usually given to increasing repair and maintenance costs, decreasing operating efficiencies, or declining revenues. (3) Uncertainties regarding the quantity of services that the asset is capable of producing can be taken into consideration by using the expected value based on engineering probability estimates, but the probability of early obsolescence is more difficult to anticipate.

A modification of the production method is allocation on the basis of revenue. For major components, this may be a good approximation of use, and it has the added advantage of taking into consideration changes in revenue per unit. But it has all of the other disadvantages of the production method. Furthermore, it is inapplicable in those cases in which goods are produced for stock and where overall revenue cannot be reasonably attributed to specific assets. Notice that an allocation on the basis of revenue does not justify an allocation on the basis of net income; none of the objectives of depreciation is met by using income as a basis for allocation.

Straight-line allocation : The straight-line method of allocation is based on the assumption that depreciation is a function of time rather than of use; obsolescence and deterioration over time are considered to be determining factors in the decline in service potential, as opposed to physical wear and tear caused by use. Thus the service potential of the asset is assumed to decline by an equal amount each period. And the total cost of the services used in any period is assumed to be the same regardless of the extent of use.

How well does the straight-line method fit the usual situation? Because of the simplicity of the model, the results are correct only if the following assumptions are true or reasonably accurate; (1) The interest factor can be ignored or the cost of capital can be assumed to be zero; (2) Repairs and maintenance expenses are constant over the life of the asset. (3) The operating efficiency of the asset is just as good in the last year as in the first year. (4) The revenues (or net cash flows) made possible by the use of the asset are constant for all years of asset life. (5) All necessary estimates, including the anticipated useful life, can be predicted with a reasonable degree of certainty.

Because of the uncertainties connected with most of the above factors, it is difficult to find any depreciation method that is likely to take all of the various factors into consideration. Therefore, the straight-line method is often assumed to be as accurate as any other method. It is also frequently claimed that the straight-line method may be the most appropriate because the several factors tend to be offsetting. For example, it

may be possible that declining operating efficiencies and increasing repair and maintenance expenses are exactly offset by increasing revenues and decreasing insurance and property tax expenses. In addition, the straight-line method has the advantage of ease of operation and understanding.

A major disadvantage of the straight-line method is that it ignores the discount factor; and even if the other assumptions are correct, the reported net income gives the appearance of a rising rate of return on total invested capital. For example, assume that a machine is acquired at a cost of 5,000 and is expected to have a life of five years with no scrap value at the end of this period. Also assume that the investment provides a constant net revenue stream (total revenues less all operating costs other than depreciation) of 1,252. The total reported income is assumed to be withdrawn each year, but an amount equal to the accumulated depreciation is invested in securities at an average rate of return of 8 percent. The result is shown in Table 9.5.

The effect demonstrated in Table 9.5 indicates the error of ignoring the discount factor. The rate of return would drop back to 5 percent in the sixth year if the asset is replaced at the same cost, but erroneous

TABLE 9.5 : Rate of return earned on a five-year asset using straight-line depreciation (revenues and operating costs are assumed to be constant)

	Year				
	(1)	(2)	(3)	(4)	(5)
	Rs.	Rs.	Rs.	Rs.	Rs.
Total Capital invested at beginning of year	5,000	5,000	5,000	5,000	5,000
Carrying value of machine at beginning of year.....	5,000	4,000	3,000	2,000	1,000
Investment in securities at beginning of year	-0-	1,000	2,000	3,000	4,000
Operating revenues less operating expenses other than depreciation	1,252	1,252	1,252	1,252	1,252
Depreciation	1,000	1,000	1,000	1,000	1,000
Net Operating income	252	252	252	252	252
Interest on securities	-0-	80	160	240	320
Total income	252	332	412	492	572
Reported rate of return on total investment (percent)	5	6.6	8.2	9.8	11.4

conclusions may be drawn during each five-year period. An upward trend in income is apparent but not real. Projections based on this trend would be erroneous. Furthermore, it leads to the observation that a technologically improved machine must have considerable operating superiority to challenge the existing asset before the end of its physical life. Like the "onehoss shay," the existing machine would be used until it finally fell apart. If additional operating equipment is obtained each year, instead of purchasing securities as in the above example, it can be demonstrated that the rate of return will oscillate with a decreasing amplitude until an average 8 percent rate of return is finally reached. If the compound interest method of depreciation is used under the above assumptions, a constant rate of return results. This is demonstrated below in the discussion of the increasing-charge methods.

The assumption of a positive rate of return, however, does not discard the straight-line method entirely. Under specific conditions, the decline in operating efficiency may offset the decline in associated earnings so that the computed depreciation may be constant each year. For example, in Table 9.6, the net revenue contribution is assumed to decline by a constant amount of \$80 each year. If the rate of return is 8 percent, the excess of the contribution over the associated earnings would be constant each year, thus supporting a straight-line depreciation charge.

Increasing – charge methods : In the direct financing method of treating long-term leases in the reports of the lessor discussed in the previous chapter, the cost of a product purchased and leased under a long-term contract is reclassified as the net investment in the lease. Income is reported by multiplying the internal rate of return by the book value at the beginning of each year.

TABLE 9.6 : Computation of depreciation assuming an 8 percent rate of return and a constant decline in service contribution of \$80

Year	(1) Book value of asset at beginning of year (Rs.)	(2) Associated earnings 8 percent of col. 1 (Rs.)	(3) Net Revenue Contribution (Rs.)	(4) Depreciation (col. 3 – col. 2) (Rs.)
1.....	5,000	400	1,400	1,000
2.....	4,000	320	1,320	1,000
3.....	3,000	240	1,240	1,000
4.....	2,000	160	1,160	1,000
5.....	1,000	80	1,080	1,000

The amount of cash received each period less this reported income is assumed to represent a return of the amount invested in the lease (equal to the cost of the product). Therefore, if an equal cash rental is received each year, an increasing amount would be reported as a return of the investment. Although the return of the investment is not generally referred to as depreciation, the effect is the same and an allocation procedure is required. The effect of this method is demonstrated in Table 9.7.

TABLE 9.7: Computation of the return of investment for direct financing leases reported by lessors (assuming an 8 percent rate of return)

Year	(1) Book value of lease at beginning of year (Rs.)	(2) Associated earnings 8 percent of col. 1 (Rs.)	(3) Annual cash receipt (Rs.)	(4) Net decline in book value (Rs.)
1.....	5,000	400	1,252	852
2.....	4,148	332	1,252	920
3.....	3,228	258	1,252	994
4.....	2,234	178	1,252	1,074
5.....	1,160	92	1,252	1,160

The use of the cash flow as a basis for amortizing the investment in this case is assumed to be justified because the maintenance and operating costs are paid by the lessee and because there are few interactions with other assets. But it may be criticized on the basis of its assumption of a constant rate of return and on the basis of its failure to distinguish between a true interest income and the income from the operations of obtaining and servicing the lease contracts.

The annuity and sinking – fund methods of depreciation also result in increasing amortization amounts, similar to the computations in Table 9.7.

The sinking-fund method has been used occasionally by public-utility firms that have charged depreciation with the annuity portion only and charged interest expense with the increasing interest computed on the increasing accumulated depreciation (equal to a hypothetical sinking fund). This method is particularly relevant when the utility's rates are computed by using an undepreciated cost as the rate base. One of the most relevant arguments for the sinking-fund method is that it permits a public utility to earn a constant rate of return on its total investment when its revenue is held constant through regulation.

The increasing-charge methods are also relevant for those situations in which insurance and property tax expenses decline over the asset's life while operating efficiency, revenues, and repairs and maintenance remain fairly constant. Some public-utility properties meet these conditions. In other cases, expectations of increasing revenues may support the use of increasing-charge depreciation methods. For example, toll roads and toll bridges may be built to handle peak traffic loads anticipated after 10 or more years. Thus, the revenues may be expected to increase as demand increases over the asset's life.

The main arguments against the interest methods of depreciation are that (1) very few assets can be expected to provide services with a constant or increasing value; (2) repair and maintenance costs usually increase; and (3) operating efficiency usually declines over the asset's life. The interest methods are not necessarily more dynamic than the straight-line method just because they take into consideration one additional factor—the rate of return; they still omit more factors than they include.

Decreasing-charge methods of depreciation : Several methods of depreciation have been suggested and used from time to time that result in a decreasing depreciation charge over the expected life of an asset (also known as accelerated depreciation). The most common methods are the sum-of-the-years'-digits method and the constant-percentage-of-declining-book-value method. In the latter method, a precise formula can be used to determine the constant rate of decline when the scrap value is positive, but an approximation of this rate (acceptable for tax purposes) is obtained by taking twice the straight-line percentage (known generally as the double-declining-balance method). However, other allocation distributions can be obtained by using smaller percentages or by applying one of many algebraic formulas resulting in declining charges.

The main impetus for the increased interest in the declining charge methods in recent years has come from the liberalization in the choice of depreciation methods permitted by the Internal Revenue Code. However, the theoretical justification for declining charge methods is based on non-tax considerations. The conditions frequently claimed as justifications for the declining-charge methods are as follows: (1) declining annual service contributions without consideration for interest or the cost of capital; (2) declining operating efficiency or operating performance, resulting in increases in other operating costs; (3) asset values (represented by the discounted value of remaining service values) declining more in early years and less during the later years of asset life; (4) the expiration of the cost of equal service contributions discounted back to the date of acquisition – thus, more is paid for the service values becoming available in the early years than the service values of the later years even though all service values are equal when used; (5) increasing repair and maintenance costs; (6) declining cash proceeds or revenues; (7) the uncertainty of revenues of later years because of possible obsolescence. These conditions are discussed more fully in the following paragraphs.

Declining revenue contributions and declining operating efficiency are interrelated and have the same

$$13 \left(r = 1 - \sqrt[n]{\frac{s}{c}} \right)$$

where

r = the constant rate.

s = scrap value.

c = cost.

n = years of expected life.

consequences with respect to the depreciation that should be charged to operations in each period. The decline in the annual net revenue contribution may result because of a decline in use in the later years of life, because more time is required for repairs, or because of the greater danger of breakdowns with heavy use. Net revenue contribution may also decline because of decreased efficiency and thus less output, as for a power generator. On the other hand, declining operating efficiency may result in larger fuel costs, higher labor costs, or greater waste in the use of materials. All of these mean that the net contribution of the asset is less than when it was new. Thus, if interest costs are ignored, this decline in the net service contribution of the asset provides justification for a decreasing-charge depreciation method. For example, if interest were ignored in Table 6, the depreciation each year would be the net revenue contribution (column 3) divided by 6,200 (the total of column 3) and multiplied by 5,000 (the original costs of the asset). That is, a constant relationship is assumed between the net revenue contribution each year and the depreciation charge based on cost.

A declining pattern of annual net revenue contributions appears logical on *a priori* grounds. For most classes of equipment and buildings, one would expect a decrease in operating efficiency over the life of the asset, increasing repair and maintenance costs, and possibly declining net revenues because of increasing obsolescence and competition. Terborgh demonstrated that when using a 10 percent discount rate, the loss in total service value during the first half of the asset's life ranges from 71 percent for a 10-year asset to 56 percent for a 100-year asset. On empirical grounds, Terborgh concluded that for equipment, the decline in total service value is about one half during the first third of the asset's life and about two thirds for the first half of the asset's life.

Another proposed justification for the declining-charge depreciation methods is based on the assumption that the original cost represents the discounted value of the expected annual contributions to be obtained by using the asset. The cost of the earlier annual contribution is therefore greater than the cost of the more remote values. Thus even if the annual net revenue contributions can be expected to be equal in all years of service life, the depreciation charge based on cost would be greater in the early years and smaller in the later years.

From a theoretical point of view, this proposal for a logical explanation of the declining-charge methods is quite weak. First, it represents a very rigid application of the cost rule—each unit of service value is charged to expense in the amount of its original discounted cost. The longer the waiting period, the lower this cost will be. Second, it applies a very rigid form of the realization rule. The difference between the original cost and the value of the services is assumed to be realized only when the asset is used or when its product is sold. Third, depreciation is assumed to represent the expiration of the original cost of each year's contribution, rather than the net revenue contribution less the earnings associated with a declining investment. Under the static conditions assumed in this proposal, the result would be a rapidly increasing rate of return based on the reported net income. Not only would greater amounts of interest be realized in later years, but also the income from reinvested capital would tend to increase the net incomes of the later years. This proposal is also subject to the same criticisms as the interest method—it omits more factors than it includes in the logic. Declining depreciation methods have some support, however, for other reasons.

The argument that a declining depreciation charge should be used to offset increasing repair and maintenance expenses is not without merit. As indicated earlier in this chapter, repair and maintenance expenses are related to the depreciation process and should be included in the total cost of the services or in the computation of the net revenue contribution. One word of caution, however—only normal repair and maintenance expenses should be included in the process of equalizing the total of repair expenses and depreciation. Expenses resulting from inefficiencies should appear in the years in which they occur for managerial control purposes and as information to investors.

Decreasing expected cash proceeds or revenues also provide support for decreasing-charge depreciation methods for all assets used in operations. If revenues are expected to decline over the life of an asset it may be assumed that a larger part of the original cost of the asset was incurred to obtain the revenues of the early years. Therefore, the revenues provide a good indication of the net contribution of the asset each year. Here again, standard depreciation methods should not be assumed to take care of the decreasing

revenue factor automatically. Estimates should be made for specific assets, and appropriate depreciation schedules could then be devised. A question may be raised as to whether or not anticipated declines in the prices of products should be taken into consideration in the computation of the depreciation allocation. The answer is in the affirmative if the decline in price can be attributed to anticipated increases in competition or decreases in demand. Unanticipated changes in product prices would be reflected in the incomes of each period affected.

Uncertainty is the most difficult factor to treat in the allocation of depreciation charges. The uncertain values include the expected life, anticipated net revenue contributions, and future repair and maintenance charges. In most cases, the uncertain values can be converted into single-valued certainty equivalents by using the expected values adjusted for risk preference. Therefore, uncertainty in the life of the asset is not proper justification for the use of decreasing-charge methods of depreciation. Uncertainty regarding repair and maintenance expenses also provides little justification for declining depreciation charges because this uncertainty is primarily a result of inadequate experience can data rather than a result of uncertainty regarding unpredictable events. Uncertainty regarding future revenue contributions, however, does provide some support for declining-charge depreciation methods. The argument is that since early revenues are more certain than more distant revenues, the latter are discounted more heavily in the initial investment decision, and therefore a larger part of the cost of the asset should be allocated to the earlier years. The main defect of this argument is that it is difficult, if not impossible, to justify and specific depreciation schedule on the basis of uncertainty alone.

Summary of conditions under which each pattern is applicable : One or more of the conditions listed below may provide support for the general allocation pattern indicated. The specific depreciation method to be used should be selected on the basis of as many relevant factors as possible.

1. *Variable charge methods*

The value of the asset declines as a function of use rather than because of the passing time.

Obsolescence is not an important factor in determining the life of the asset.

Repairs, maintenance expenses and revenues are proportional to use.

2. *Straight-line method*

Discounted value of future benefits declines as a function of time rather than use.

The interest factor can be ignored or assumed to be offset by other factors.

Repairs, maintenance expenses, operating efficiency, and revenues are relatively constant over the life of the asset.

3. *Increasing-charge method*

The cash flow or net revenue contribution of each year is constant, but the asset value each year represents the discounted value of remaining contributions.

Repair and maintenance expenses are constant or decreasing over the life of the asset.

Revenues and operating efficiency are constant or increasing over the life of the asset.

4. *Decreasing-charge methods*

Increasing repair and maintenance charges.

Decreasing operating efficiency and revenues.

Interest factor recognized only when "realized" through use of the asset.

Uncertainty of revenues of the later years.

Note that the above criteria are based primarily on an assumed relationship between depreciation and net revenue contributions. Except for estimation theory, there is no logical reason that has been proposed to support allocation on these grounds. The matching rule by itself is insufficient. However, it may be argued that by allocating on the basis of net revenue contributions, the depreciation charge becomes neutral or sterilized. That is, the allocation is neutral if the decision made on the basis of the information would have

been the same if no depreciation had been reported if this is the case, however, it appears that it would be better to omit allocations entirely than to take the chance that they might not be neutral.

It appears from the above discussion of depreciation that the allocation of cost or other bases of long-term assets is either arbitrary or it is based on unmeasurable variables such as net revenue contributions or cash flows. Four possible alternatives to this dilemma are (1) avoid allocations by measuring residual asset valuations in terms of market prices at the end of each period; (2) attempt no allocations and present cash flow and funds flow statements instead of income statements; (3) select uniform methods of allocation on the basis of their ability to permit predictions, regardless of their inherent logic; or (4) present only neutral or sterilized allocations.

Depreciation and Accounting Standard : The Institute of Chartered Accountants of India (ICAI) issued, first time, the accounting stand are for depreciation accounting in November 1982. Due to many developments with regard to intangible assets and business transaction. This standard was revised in 1995. Now it is known as Accounting Standard – 6 (or AS-6),(Revised). Explains as follows :

Title :

AS-6 (Revised) Depreciation Accounting.

Scope

An accounting professional ought to be well versed with all the issues pertinent to fixed assets, and be able to apply appropriate criteria for recognition of fixed assets and determination of costs and values thereof such that their inclusion in the financial statement does not tarnish the truth and fairness of the information presented. In order that this is achieved, appropriate depreciation methods should be applied and accounted for in the financial statements.

Depreciations inextricably linked to fixed assets (AS-10). The key elements in fixed assets are

- They are items for use in business
- They are held, NOT for sale (or resale)
- Use of assets will produce revenues over a number of years
- It is necessary to write off a portion of the cost of asset against the revenues produced by assets (matching costs and revenues)
- It is also necessary to measure loss in value of asset through use
- The charge to revenue is known as depreciation.

While providing conceptual clarity, AS-6 deals with the selection and application of appropriate methods of accounting for depreciation, and related disclosures. It is worth noting that because of flexibility of accounting principles involved, skill and judgment are required as to how and when to record the transactions embracing depreciation

Coverage under AS-6 excluded

The standard does not apply to the following assets to which certain other special considerations apply.

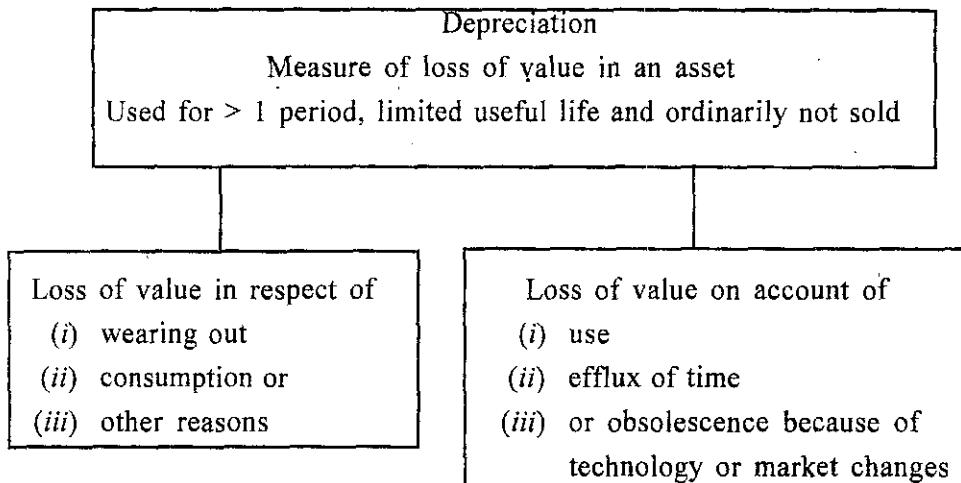
- Forest plantations and similar regenerative natural resources
- Wasting assets including expenditure on the exploration for and extraction of minerals, oils, natural gas and similar non-generative resources
- Expenditure on research and development
- Goodwill and Livestock
- Land—unless it has a limited useful life for the reporting entity

Depreciation & related terms – explained

- When we consider the aspect of depreciation, generally two doubts arise. First – is it a measure of loss of value? Second—is it a means of valuation (of an asset)? In seeking an appropriate answer one should not lose sight of the fact that fixed assets are merely “costs”, and such costs should therefore, be matched to the appropriate revenue that these assets generate.

- In this backdrop, AS-6 highlights that Depreciation is a measure of wearing out, consumption or other loss of value of "a depreciable asset" arising from use, efflux of time or obsolescence through technology and market changes.
- Depreciation is allocated so as to charge a fair proportion of the depreciable amount in each accounting period during the expected useful life of the asset. Depreciation includes amortization of assets whose useful life is predetermined. (Example: lease hold land)
- Depreciable assets are assets which (i) are expected to be used during more than one accounting period, (ii) have a limited useful life, and (iii) are held by the enterprise, for use in the production, or supply of goods and services for rental to others, or for administrative purposes and not for the purpose of sale in the ordinary course of business.
- Depreciable amount of a depreciable asset is its historical cost, or other amount substituted for historical cost, less the estimated residual value.

Consider the following chart :



Measurement of Depreciable amount for each accounting period

Amount to be charged in each accounting period as depreciation is based on three criteria. These are :

- Historical cost or other amount substituted for the historical cost of depreciable asset when the asset has been revalued;
- Expected useful life of the depreciable asset; and
- Estimated residual value of the depreciable asset.

Historical Cost

Historical cost of a depreciable asset is not merely what is paid or payable to suppliers of such an asset. It also includes the following:

- Cost of transportation
- Installation and commissioning charges
- Cost of any additions or improvements made to such an asset.

The historical cost is again not a fixed amount. For example, similar assets within a class of assets could be revalued. Consequently, historical cost can go up.

Useful Economic life of the asset

The physical life of an asset is distinct and different from its economic or useful life. Normally, useful economic life of a depreciable asset is shorter than its physical life.

When determining the useful economic life of an asset, four factors must be taken cognizance of.

- a) **Physical deterioration** (wear and tear) occasioned by normal use in business. Proper repairs and maintenance carried out periodically could extend the period, and yet eventually the asset would require replacement
- b) **Technological Obsolescence** An asset being rendered economically obsolete by reason of unanticipated technological developments, or changes taking place at an accelerated pace.
- c) **Legal considerations** A mining lease could well be for a shorter period than warranted by the productive content and value of mine.
- d) **Others, such as inadequacy** Growth in business may lead to inadequacy of assets and the equipment may have to be replaced to meet new production strategy, or market demand.

These factors are not mutually exclusive. All aspects are to be considered together. Common to all factors is an element of subjectivity and judgement in estimating the useful life. Such estimates have to be reviewed periodically. Tenor of useful life should be revised where warranted.

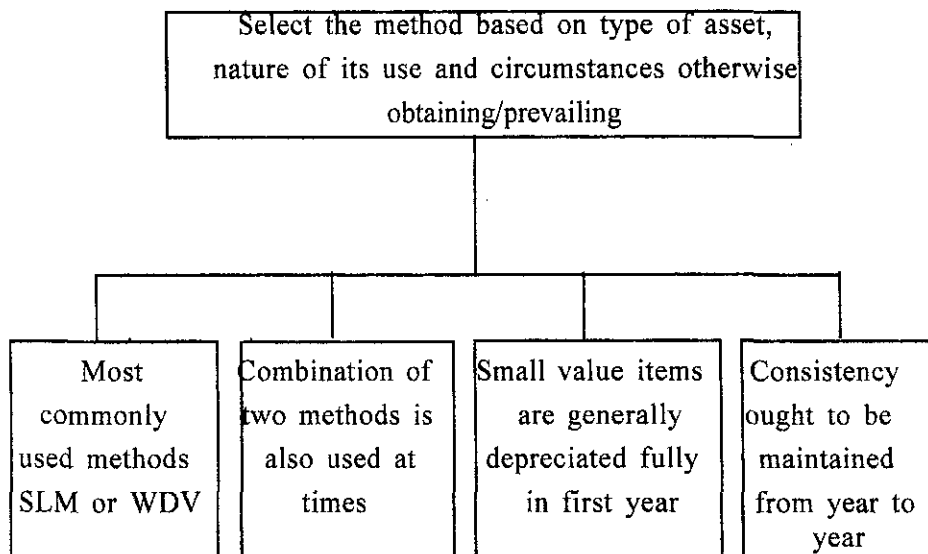
Estimated Residual Value (ERV)

Determination of ERV is an arduous task and involves high levels of subjectivity. Where the ERV is considered to be low or negligible, it is taken as NIL. One of the bases for determining ERV would be the realisable value of a **similar asset** at the end of its useful economic life, which has operated under similar conditions to those in which the asset will be used.

Depreciation policy

The principle underlying the charge of depreciation to revenue is to match the cost of asset with the revenue it produces. There are several methods available. The selection and application of an appropriate method of depreciation is based on

- (i) type of asset,
 - (ii) nature of its use, and
 - (iii) other circumstances prevailing in the business of reporting entity as brought out in the Standard
- Consider the chart given below.



Though there are no explicit provisions in the Standard, other methods of providing depreciation are allowed in an implied manner. The preferred practice is to adopt a method in line with the provisions in the Companies Act.

Change in method of depreciation

Selecting and adopting an appropriate method of accounting forms a part of accounting policy. A change in method would, therefore, be tantamount to a change in accounting policy. In accord, therefore, with canons laid down in AS-1 and AS-5, a change in the "method" of accounting for depreciation can be made only if

- a. A change in method is necessitated by Statute or a Standard,

OR

- b. It would result in more appropriate preparation or presentation of FS

More appropriate presentation is generally one, which enhances the relevance and reliability of information presented.

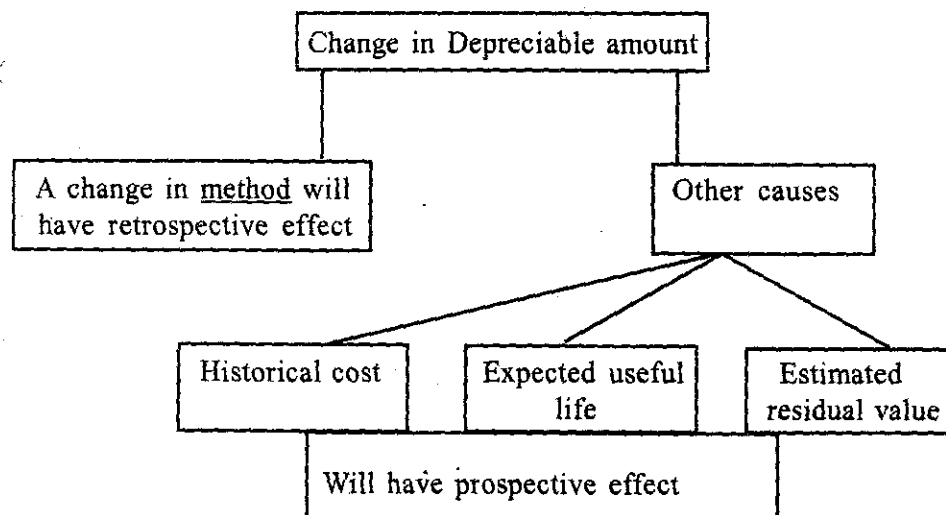
The Standard makes a very significant prescription in this area (to lay stress, this aspect is shown within the box)

1. When the method of depreciation is changed (e.g., from SLM to WDV, or vice versa) the amount to be charged to revenue is to be recomputed on a **retrospective basis** from the date asset is put into use.
2. Deficiency or surplus arising from such a recomputation must be **adjusted** in the year in which method is changed.
3. Deficiency should be charged to, and surplus credited to statement of profit and loss.
4. The impact of change should be quantified and disclosed – treating it as a change in accounting policy.

Change in measurement of depreciable amount

Depreciable amount charged to revenue is dependent on historical cost (or substituted value), expected useful economic life, and estimated residual value. Any one of these can undergo change on a subsequent date, leading to a change in the quantum of charge to revenue. The Standard provides the following :

- a) **Change in historical cost** (increase or decrease in liability in respect of an asset, due to foreign exchange rate fluctuation, etc). The unamortised amount should be determined, and written off over residual life of asset.
- b) **Historical cost substituted due to revaluation.** Depreciation amount should be based on such revalued amount juxtaposed to estimated remaining useful life of revalued assets. The incremental depreciation – relating to revalued amount – is at times debited to revaluation reserve. The Guidance Note of ICAI on this subject suggests that, for reasons of prudence and as matter of healthy practice, it would be preferable to charge depreciation on the entire revalued amount to revenue.
- c) **Change in estimated useful life.** If a periodical review results in revision of the estimated useful life, the unamortised amount should be charged to revenue over the remaining useful life.
- d) **Change in estimated residual value.** The unamortised amount should be charged to revenue over the remaining useful life.
- e) All the changes should be *appropriately disclosed*.



Additions or Extensions

The procedures to be adopted for charging depreciation in cases where additions or extensions are made to a capital asset, are :

Where extension or addition becomes an integral part of an existing asset

- a) ascertain remaining unamortised amount, including incremental cost (say x)
- b) depreciate x over the remaining useful life
- c) For practical considerations, apply identical rate of depreciation as applicable to original asset

Where extension or addition results in an asset with

- i. a separate identity and
 - ii. can be used even after the original asset is disposed of
- a) determine the incremental unamortised amount (say y)
 - b) determine useful life
 - c) Amortise y over useful life

Assets involving liability in foreign currency

Procedure for charging depreciation in respect of assets purchased on credit involving foreign currency liability

- Determine if the liability is settled immediately
- Ascertain if the liability extends beyond one accounting period

AS-6 (Revised) Depreciation Accounting

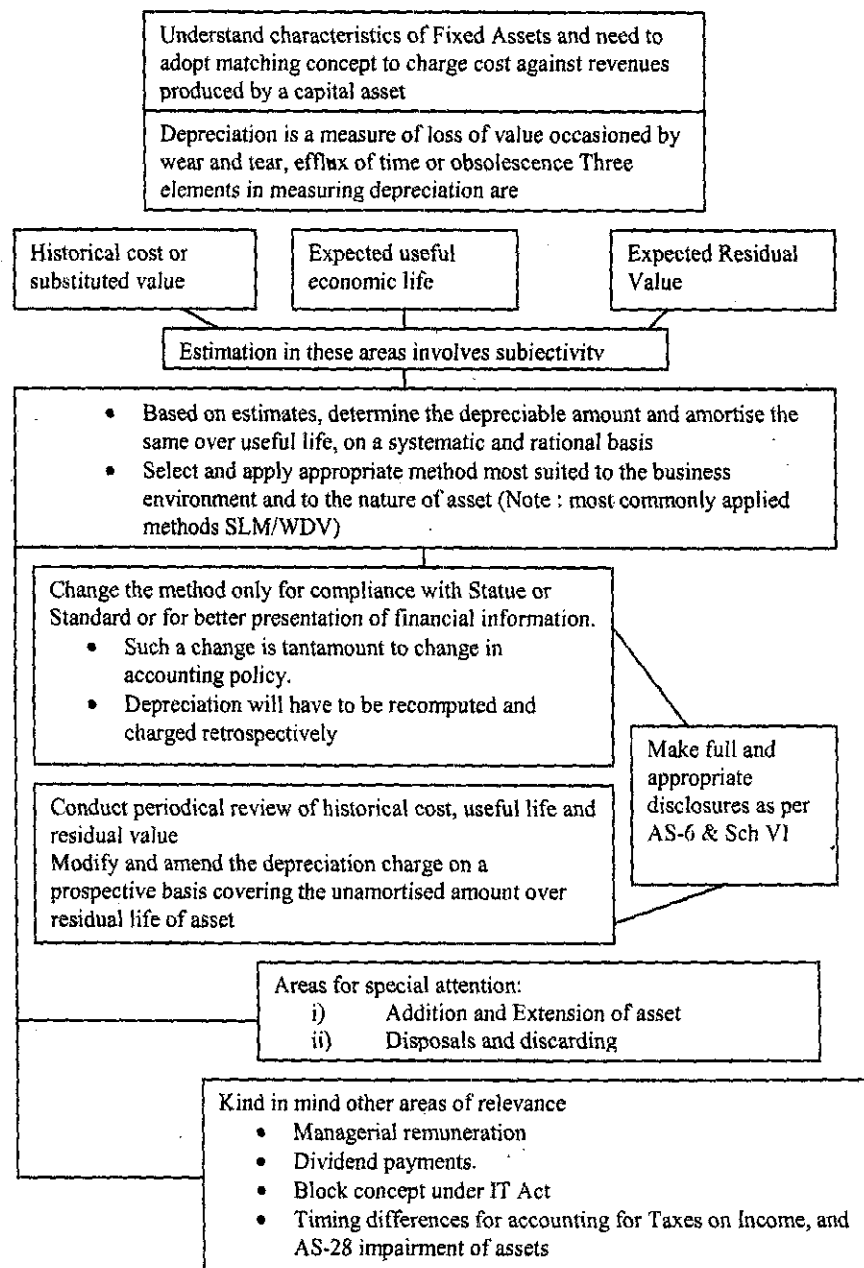
- The liability would change, depending on the movement in foreign exchange rate between domestic currency and foreign currency
- Determine the increase or decrease in liability on balance sheet date.
- Resulting increase or decrease in liability is added to or deducted from historical cost of the fixed asset concerned.
- Consequently, historical cost of the depreciable asset will change.
- Determine the revised depreciable amount.
- Depreciation on the revised depreciable amount is to be provided **respectively** over the revised useful life of the asset.

Similar procedure is to be followed when historical cost changes due to price adjustments, changes in data or for other similar reasons.

[Note : Presently, effect of a change in forex rates leading to increased liability against fixed assets acquired on deferred credit, can be capitalised under AS11. However, this option would stand withdrawn once the exposure draft on AS 11 becomes a Standard. These and other related issues are dealt with in the last chapter].

Summary of disclosure requirements.

- Historical cost or other amount substituted for historical cost of each class of depreciable assets.
- Total depreciation for the period for each class of assets.
- Accumulated depreciation for the period for each class of assets.
- Depreciation method applied.
- Depreciation rates and useful lives if they are different from the principal rates given I Schedule XIV.
- If any depreciable asset is disposed of, discarded, demolished or destroyed, the net surplus or deficiency, if material should be disclosed separately.

AS-6, A diagrammatic representation**PROVISION ABOUT DEPRECIATION UNDER COMPANIES ACT AND INCOME-TAX ACT**

Provisions Under the Companies Act

The Companies Act requires the provision of adequate depreciation for the following purposes:

1. For determination of profits out of which dividends can be declared.
2. For determination of profits for the purpose of calculation of managerial remuneration.

According to Section 205 of the Companies Act, dividend can be declared or paid by a company for any financial year only out of the profit arrived at after providing for depreciation. The depreciation shall be provided either:

- a. to the extent specified in Section 350, or
- b. in respect of each item of depreciable asset, for such an amount as is arrived at by dividing ninety-five per cent of the original cost of the asset to the company by the specified period in respect of such asset; or
- c. on any other basis approved by the Central Govt. which has the effect of writing off by way of depreciation ninety-five percent of the original cost of the asset on the expiry of the specified period; or
- d. as regards any other depreciable asset for which no rate of depreciation has been laid down, on such basis which is approved by the Central Government.

Depreciation specified in Section 350 is the amount of depreciation required to be provided before determining the profits for the purpose of managerial remuneration. According to Section 349 the net profit for the calculation of managerial remuneration should be determined only after providing for depreciation specified under Section 350. As per Section 350, this depreciation should be calculated at the rates specified in Scheduled XIV of the Companies Act. This schedule lists the rates of depreciation on various assets under four major categories. These are:

1. Depreciation rates on Buildings.
2. Depreciation rates on Plant and Machinery.
3. Depreciation rates on Furniture and Fittings.
4. Depreciation rates on Ships.

The schedule XIV specifies the rates for the above assets under both the straight line method and the written down value method. Some of the rates specified are given below for the purposes of illustration:

	<i>Write down value method</i>	<i>Straight line method</i>
Building (other than factory buildings)	5%	1.63%
Plant & Machinery	15%	5.15%
Furniture & Fittings	10%	3.34%
Factory Buildings	10%	3.34%
Ship (Ocean going) fishing vessels with wooden hull.	27.05%	10%

This schedule also specifies the rates to be used if the asset is worked in double shift or triple shifts. For assets in respect of which the extra shift allowance cannot be claimed, the scheduled appends the abbreviation N.E.S.D. (No Extra Shift Depreciation) to denote that the asset has no extra shift allowance or depreciation (for example, extra shift dep. cannot be charged for computers).

While calculating depreciation under the Companies Act for assets newly acquired during the financial year, the exact period for which the asset was used must be taken into account. Similarly in the year when the asset is disposed of or discarded, depreciation must be provided only for the exact period of usage.

Section 350 of the Companies Act also provides for terminal depreciation. If an asset is sold, discarded, demolished or destroyed, for any reason before depreciation of such asset has been provided for in full, the excess of the written down value of the asset over the sale value or the scrap value should be written off to the profit and loss statement.

While the above provisions of Section 350 must be strictly followed to arrive at the profits for calculation of managerial remuneration, a company for determining the profits available for declaring dividends may follow other methods of charging depreciation also.

The other methods specified under Section 205 are described below:

- i. Depreciation per year can be arrived at as 95% of the value of the assets/ specified period. This formula depreciates the asset under the straight line method. Specified period is defined under Section 205 as the number of years at the end of which at least 95% of the original cost of the asset will have been provided for as depreciation if depreciation is calculated under section 350.
- ii. Depreciation can also be provided according to any other method approved by the Government. However such method must result in writing off depreciation to the extent of 95% of the original cost on the expiry of the specified period.
- iii. In the case of assets for which the rate of depreciation has not been specified under schedule XIV, depreciation can be provided on a basis that is approved by the Central Government.

A company can therefore follow different methods for depreciation for the purposes of calculation of divisible profits and ascertainment of managerial remuneration.

Prior to the amendment of Section 350 in 1988 depreciation for the purpose of calculation of managerial remuneration had to be provided at the rates specified under the Income-Tax Act. With the steep increase in the rates allowable under Income-tax Act, it was felt that the companies will find it difficult to pay adequate managerial remuneration and declare dividends.

Hence the amount of depreciation to be provided under the Companies Act was delinked from the Income-tax Act and the Schedule XIV was included in the Companies Act.

Provisions under the Income Tax Act

The provisions of the Income-Tax Act with regard to depreciation are as follows:

- i. Only the written down value method of charging depreciation can be used.
- ii. The rates of depreciation as specified for four categories of assets, namely, buildings, furniture and fittings, plant and ships. Some of the rates specified are given below by way of illustration:

Residential Building	5%
Factory Buildings	10%
Furniture & Fittings	10%
Plant and Machinery	$33\frac{1}{3}\%$
Ocean-going Ships	20%
- iii. Depreciation can be provided for a full year even if the asset had been used only for the part of the year.
- iv. Extra shift allowance cannot be claimed.

Unlike the Companies Act under which depreciation can be claimed in respect of each asset used, under the Income Tax Act, assets are to be grouped together into blocks and the depreciation will be charged for the block. According to the Act block means a group of assets falling within a class of assets such as building, machinery, plant or furniture, in respect of which the same percentage of depreciation is prescribed.

The following example illustrates the concept of block of assets as given in the Income Tax Act.

A company owns the following on 1st April 1994.

	<i>Rate of depreciation under Income Tax Act</i>
Building	5%
Plant	33%
Furniture	10%
Ships	20%

Machinery X	$33\frac{1}{3}\%$
Machinery Y	$33\frac{1}{3}\%$
Machinery Z	50%

The blocks of assets for the company would be as follows:

First block (Building, Rate of Depreciation 5%)	Building 1
Second Block (Building, Rate of Depreciation 10%)	Building 2
	Building 3
Third Block (Building, Rate of Depreciation 20%)	Building 4
Fourth Block (Machinery, Rate of Depreciation) $33\frac{1}{3}\%$	
Machinery X	
Machinery Y	
Fifth Block (Machinery, Rate of Depreciation 50)	
Machinery Z.	

The implication of the concept of a block of assets is that when an asset is sold, the sale proceeds will be used to reduce the written down value of the block of the assets. For each asset the loss or profit on sale will not be calculated. Only if all the assets in a Block are disposed off or sold then the balance in the block will be written off to the profit and loss statement.

All assets acquired at a cost which does not exceed Rs. 5,000 can be written off in the year of purchase itself.

In the case of companies, the amount of depreciation allowable under the Income Tax Act will widely differ from that required to be charged under the Companies Act.

In practice it is quite possible that a company adopts three different methods of depreciation for three different purposes one method to determine the divisible profits, another method to determine profits for the purpose of calculating the managing remuneration and yet another method for the ascertainment of taxable Income.

The illustration given below brings out clearly the difference between depreciation calculated as per the Companies Act and that under the Income-Tax Act."

M. Ltd., closes its accounts on 31st March every year. For accounting purposes depreciation is provided on the straight line basis. The company acquires the following machinery for its factory on the following different dates.

Machinery	Date of Purchase	Actual cost	Rate of depreciation under Schedule XIV on straight line basis	Depreciation under Income Tax Rule
A	April 1, 1993	3,60,000	5.15%	33.33%
B	August 1, 1993	5,00,000	5.15%	33.33%
C	October 1, 1993	4,00,000	5.15%	33.33%

On December 1, 1994, the company sells machine B for Rs. 3,00,000. Machine A is worked on double shift basis

Depreciation under the Companies Act.

Financial Year 1993-94:

Normal depreciation

Machine A (5.15% of Rs. 3,60,000) 18,540

Machine B	17,167	
Extra shift allowance		
Machine A (2.94% of 3,60,000)		10,584
Total		46,291

The Schedule XIV specifies 2.94% as the depreciation for the second shift.

Financial Year 1994-95

Normal Depreciation		Rs.
Machine A (5.15% of Rs. 3,60,000)		18,540
Machine B (5.15% of Rs. 5,00,000) $\times \frac{4}{12}$		8,583
Machine C (5.15% of Rs. 4,00,000) $\times \frac{4}{12}$		10,300
Extra Shift Allowance		
Plant (2.94% of Rs. 3,60,000)		10,584
Plant B-Loss on sale (5,00,000-17,167-8,583-3,00,000)	1,74,250	
		2,22,257

Depreciation under the Income-tax Act.

Financial Year 1993-94

Cost of Machines A and B acquired	8,60,000
Depreciation on Rs. 8,60,000 @ $33\frac{1}{3}\%$	2,86,638

Financial Year 1994-95

Written down value of the block (8,60,000-2,86,638)	5,73,362	
Add cost of Machine C		4,00,000
	9,73,362	
Less Sale proceeds of Machine B	3,00,000	
Written down value of block	6,73,362	
Dep. on the above WDS @ 33.33%	2,24,432	

EVALUATION OF ACCELERATED METHODS

The use of accelerated methods of depreciation provide certain benefits and is useful to business enterprises in many respects. Some benefits which may occur to business entities are as follows:

1. **Cash Flow.** In terms of cash flow, initial depreciation serves the purposes of an interest free loan to the tax payer in respect of the year of erection of building or installation of machinery and plant. Since it results in postponement of the tax liability of the assessee, the amount of tax saved in the initial years result in a net addition to cash flow, which is repaid through a higher tax liability during the later years.

Depreciation is an expense that does not use funds currently. In the preparation of changes in financial position, depreciation is added back to net income in calculating funds provided by operations. Because it is added back to net income, the funds from operations is often defined as net income plus depreciation. However, depreciation is not a source of fund. Funds from other operations come from revenues from customers, not by making accounting entries. In fact depreciation expense results from an outflow of funds in an earlier period, that is only now being recognised as an operating expense. The following example explains the fact that depreciation does not produce funds. Assume a company has net income in 1985 of Rs. 20,000 resulting from revenues of Rs. 1,25,000, expenses other than depreciation of Rs. 95,000 and Rs. 10,000 of depreciation. Now assume the depreciation increases to Rs. 25,000 while other expenses and revenues are unchanged, net income is Rs. 5,000 (ignore income taxes in both examples). The following exhibit shows that changes in depreciation do not affect funds from operations, funds from operations would be the same Rs. 30,000 in both situations.

Exhibit : Impact of Depreciation on Funds from Operations

<i>Income Statement</i>		<i>Funds from Operations</i>	
		(i) Depreciation	Rs. 10,000
Revenue	Rs. 1,25,000	Net Income	Rs. 20,000
Less : Expense except Dep.	Rs. 95,000	Add: Expenses not using capital: Depreciation	Rs. 10,000
	Rs. 30,000		
Dep. Exp.	Rs. 10,000	Total funds from operations	Rs. 30,000
Net Income	Rs. 20,000		
		(ii) Depreciation Rs. 25,000	
Revenue	Rs. 1,25,000	Net Income	5,000
Less : Expenses except Depreciation	95,000	Add: Expenses nont using capital Depreciation	25,000 30,000
Depreciation Expenses	25,000	Total funds from operation	30,000
Net Income	5,000		

Depreciation does help determine cash flow, however, by its effect on the measurement of taxable income and thus tax expenses. The more rapid the rate of depreciation charges for tax purposes, the slower the rate of tax payment. For this reason, accelerating depreciation for tax purposes stimulates acquisition of depreciable assets and is viewed as significant in increasing the rate of capital formation. In India, depreciation provision as a source of funds for joint stock companies accounted for more than 50% of the funds utilised in gross fixed assets formation and thus it occupies an important role to play in the internal financing of industry. An increasing dependence on this source of finance would suggest lessening reliance of companies on the capital market

2. **Tax Advantage.** Many companies may adopt accelerated depreciation methods for tax return purposes because of the tax advantage that they entail. Higher depreciation charges mean lower income and lower taxes. If accelerated methods are used for tax purposes they do not have to be used for financial reporting purposes. Every rupee that can be justified as a deduction saves the company about 50% in tax money. Since the total tax deduction is limited to the total cost of the asset; the different depreciation methods merely shift the years in which the deduction is made. In so far as the deduction is made in earlier years rather than later, this saves interest but more than that it put the tax payer into possession of funds at an earlier date and this increases his flexibility of financial management. The actual tax saving argument is sometimes short-sighted, but the saving of interest and the increased financial flexibility are actual and constitute the real pressure behind depreciation accounting. Thus accelerated depreciation serves the purposes of an interest free loan.
3. **Benefit to Growing Company.** The postponement of the liability under accelerated depreciation may be very useful for a growing firm investing more and more in fixed capital and more so far a new firm which may take sometimes to established its business. When a company is expanding, the higher depreciation charges will help in expansion and investment which are essentially needed for the company.
4. **Replacement of Assets.** Accelerated depreciation may induce the tax payer to replace old machinery or equipment before the end of its useful life by new and improved model and also gain the tax advantage. But this would be just one of the considerations in deciding the proper time for replacement. Accelerated depreciation methods allow a business to recover more of the investments in a fixed asset in the first few years of the asset's life. This is an important factor in any situation in which there is a high rate of technological change. It is also important when inflation is a factor and depreciation is limited to the original cost of a long term asset

Accelerated depreciation does provide an incentive to invest in fixed assets and it helps particularly a growing firm than a stationary or a declining one. As for as the form of accelerated depreciation is concerned, the diminishing balance or sum-of-the-years-digits method seems preferable to a straight line method particularly in respect of plant and machinery. Selective use of initial depreciation and at varying rates for investment in priority sectors is likely to serve a better purpose than its general use. In case of underdeveloped economies, initial depreciation has a special role to play for encouraging investment in backward region and also in small and medium sized enterprises.

FACTORS INFLUENCING THE SELECTION OF DEPRECIATION METHOD

Depreciation has a significant effect in determining the financial position and result of operations of an enterprises by calculating net income as well as deduction from taxable income. The quantum of depreciation to be provided in an accounting period involves the exercise of judgement by management in the light of technical, commercial, accounting and legal requirements and accordingly may need periodical review. If it is considered that the original estimate of useful life of an asset requires any revision, the unamortised depreciable amount of the asset is charged to revenue over the revised remaining useful life. Alternatively, the aggregate depreciation charged to date is recomputed on the basis of the revised useful life and the excess or short depreciation so determined is adjusted in the accounting period of revision.

There are several methods of allocating depreciation over the useful life of the assets. Those most commonly employed in industrial and commercial enterprises are the straight line method and the reducing balance method. The management of a business selects the most appropriate method (s) based on various important factors, e.g., (i) type of asset, (ii) the nature of the use of such asset and (iii) circumstances prevailing in the business. A combination of more than one method is sometimes used. In respect of depreciable asset which do not have material value, depreciation is often allocated fully in the accounting period in which they are acquired.

The following factors influence the selection of a depreciation method:

1. **Legal Provisions.** The statute governing an enterprise may be the basis for computation of the depreciation. In India, in the case of company, the Companies Act, 1956 provides that the provision of depreciation, unless permission to the contrary is obtained from the Central Government, should either be based on reducing balance method at the rate specified in the Income Tax Act / Rules or on the corresponding straight line depreciation rates which would write off 95% of the original cost over the specified period. Where the management's estimate of the useful life of an asset of the enterprise is shorter than that envisaged under the provision of the relevant statute, the depreciation provision is appropriately computed by applying a higher rate. If the management's estimate of the useful life of the assets is longer than that envisaged under the statute, depreciation rate lower than that envisaged by statute can be applied only in accordance with the requirements of the statute.

For tax purpose, the asset would be written off as quickly as possible. Of course, a firm can deduct only the acquisition cost, less salvage value, from otherwise taxable income over the life of the asset. Earlier deductions are, however, worth more than later ones because a rupee of taxes saved today is worth more than a rupee of taxes saved tomorrow. That is, the goal of the firm in selecting a depreciation method for tax purpose should be to maximise the present value of the reductions in tax payments from claiming depreciation. When tax rates remain constant over time and there is a flat tax rate (for example, income is taxed at a 40% rate), this goal can usually be achieved by maximising the present value of the depreciation deductions from otherwise taxable income.

Depreciation is a tax-deductible expense. Therefore, any profit a business enterprise sets aside towards depreciation is free of tax. Those enterprises, who make huge profit and choose to pay a lot of tax, should wisely go for more depreciation rather than pay more tax. They can follow accelerated methods of depreciation, can seek ways of increasing the amount of depreciation and amortisation on their assets so as to salt away more tax-free funds.

2. **Financial Reporting.** The goal in financial reporting for long-lived assets is to seek a statement of income that realistically measures the expiration of those assets. The only difficulty is that no one knows, in any satisfactory sense, just what portion of the service potential of a long-lived asset expires in anyone period. All that can be said is that financial statements should report depreciation charges based on reasonable estimates of assets expiration so that the goal of fair presentation can more nearly be achieved. U.K. Accounting Standards SSAP 12 issued in December 1977 argues:

"The management of a business has a duty to allocate depreciation as fairly as possible to the periods expected to benefit from their use. They should select the method regarded as most appropriate to the type of asset and its use." (1977)

Provision for depreciation of fixed assets having a finite useful life should be made by allocating the cost (or revalued amount) less estimated residual values of the assets as fairly as possible to the periods expected to benefit from their use."

3. **Effect on Managerial Decision.** The suitability of a depreciation method should not be argued only on the

basis of correct portrayal of the objective facts but should also be decided in terms of their various managerial effects. Depreciation and its financing effect take the less basic but still realistic approach that, regardless of any effect which depreciation may have upon the total revenue stream, the recognition of depreciation either through the cost of product or as an element in administration and marketing expenses, does cut down the showing of net income available for dividends and thus restricts the outflow of cash. The actual tax saving argument is sometimes short sighted, but the saving of interest and the increased financial flexibility are actual and constitute the real pressure behind depreciation accounting. Business managers consider these points, but they have the added responsibility of protecting management against the possible distortions of reported cost and misleading incomes which these pressures might engender.

A depreciation method which would lead to unwise dividends, distributing cash which was later needed to replace the asset, would be a poor method. A depreciation method which matches the asset costs distributed period by period against the revenues produced by the asset, thus helping management to make correct judgements regarding operating efficiency, would be a good method.

4. **Inflation.** Depreciation is a process to account for decline in the value of assets and for this many methods such as straight line, different accelerated methods are available. In recent years, inflation has been a major consideration in selecting a method of depreciation. To take an example, suppose one bought a car for Rs. 1,00,000 five years ago and wrote off Rs. 20,000 every year to account for depreciation using straight line method, expecting that a new car can be purchased after five years. However, five years later, it is found that the same car costs Rs. 2,00,000 whereas only Rs. 1,00,000 has been saved through depreciation.

Why a new car or new asset cannot be purchased with the accumulated amount of depreciation? The difficulty has been created by the inflation. In fact, inflation has eaten into the money saved through depreciation over the five years. This means that a business enterprise (or the owner of car) eats into the asset faster than the rate of depreciation as the cost of replacing the asset is increasing.

The accelerated methods of depreciation tend to write off Rs. 1,00,000 (the price of car in the above example) over the five years. But higher amounts are written off in the beginning as depreciation and hence, larger amounts are accumulated through depreciation which increases the 'replacement capability' of a business enterprise.

The problem created by inflation in depreciation accounting has contributed in the emergence of the concept of inflation accounting. In inflation accounting, an attempt is made to increase the depreciation amount in line with inflation so that though money to replace the asset at its current inflated cost can be accumulated.

5. **Technology.** Depreciation is vital because it decides the regenerating capacity of industry and enables enterprises to set aside an amount before submitting profits to taxation, for replacing machines. Realistically, the depreciation that enterprises are eligible for and capable of accumulating should cover the purchase price of assets, when the time comes for replacement.

But the critical question is, when exactly does the time for replacement come? Life of machine, is no longer an engineering concept. Many electronic companies in USA had to write off their assets in three years because new technologies came in and old machines overnight became scrap. Commercial life of machines is decided by technological progress. The arrival of new machines is not governed by the depreciation policies of government. Therefore, the shorter the period over which the enterprise is able to recover depreciation, the better its chances to adapt to the new technology and survive. In an industry which are exposed to rapid technological progress, a fixed depreciation rate is the surest way to force it into bankruptcy.

Accumulating depreciation enough for buying new technology does not depend merely on a rate of depreciation. Business enterprises should have profit to provide for depreciation resulting into adequate money for the replacement at the proper time. An industry in which profits are likely to be high in the initial years will have to provide more depreciation in those years than in the later years when the profit is likely to be low.

Technological progress as a dimension of depreciation has become more important than the engineering life of machines. A constant rate of depreciation may be followed when an enterprise is making profit at a constant rate. It is only when profit, are fluctuating that the company in years of high profits will provide for higher depreciation. It is not able to do that because of fixed rate of depreciation imposed by the government, it will be over-taxed. As a result, it will not be able to retain enough earnings after payment of tax and dividends to make up for its inability to provide normal depreciation in years of adversity. At the end of the useful life of machines the company will not have the resource to invest in new machines. It will succumb to technological progress.

6. **Capital Maintenance.** During inflation, depreciation, if based on historical cost of assets, helps a business firm to gather an amount equivalent to the historical cost of the asset less its salvage value. This treatment of depreciation facilitates in maintaining only the 'money capital' or financial capital of business enterprises. However, this results into matching between historical amount of depreciation and sales in current Rupees. The result is that reported net income is overstated and dividends is distributed from the net income which is not real but fictitious. This way of income measurement and maintaining only financial capital during inflation results into erosion of real capital of business enterprises.

However, if depreciation is provided on replacement or current value of assets, it gives matching between current cost (depreciation) and current revenues. This does not involve any hoarding income as is found when depreciation is determined on historical cost. Depreciation on current value of assets provides real operating income in the profit and loss account. This means that capital of business enterprise would be maintained in real terms. Valuation of fixed cost in terms of current cost reflects the current value of operating capability of business enterprises.

CHANGE IN DEPRECIATION METHOD

The depreciation method selected should be applied consistently from the period to period. According to ICAI's AS 6 Depreciation Accounting, a change from one method of providing depreciation to another should be made only if the adoption of the new method is required by statute or for compliance with an accounting standard or if it is considered that the change would result in a more appropriate preparation or presentation of the financial statements of the enterprise. When such a change in the method of depreciation is made the unamortised depreciable amount of the asset is charged to revenue over the remaining useful life by applying the new method. U.K. Standard SSAP 12 Accounting for Depreciation states:

"A change from one method of providing depreciation to another is permissible only on the grounds that the new method will give a fairer presentation of the results and of the financial position."

When there is change from one method of depreciation to another, the unamortised cost of the asset should be written off over the remaining useful life on the new basis commencing with the period in which the change is made. The effect should be disclosed in the year of change, if material.

Depreciable amounts are allocated to each accounting period during the useful of the asset by a variety of systematic methods. Whichever method of depreciation is selected its consistent use is necessary irrespective of the level of profitability of the enterprise and the taxation consideration, in order to provide comparability of the results of operations of the enterprise from period to period.

Disclosure About Depreciation

According to AS 6 Depreciation Accounting, the following information should be disclosed in the financial statements:

- i. the historical cost or other amount substituted for historical cost of each class of depreciable assets;
- ii. total depreciation for the period for each class of assets; and
- iii. the related accumulated depreciation.

The Accounting Standard 6 has proposed that the following information should also be disclosed in the financial statement along with the disclosure of other accounting policies:

- i. depreciation methods used,
- ii. depreciation rates or the useful lives of the assets, if they are different from the principal rates specified in the statute governing the enterprise.

Also, in case the depreciable assets are revalued, the provision for depreciation is based on the revalued amount on the estimate of the remaining useful life of such assets. In case the revaluation has a material effect on the amount of depreciation, the same is disclosed separately in the year in which revaluation is carried out.

Any adjustment for the excess or short depreciation made in any accounting period due to the revision in estimate of the useful lives of depreciable assets is treated as an extraordinary item and disclosed accordingly.

A change in the method of depreciation is treated as a change in an accounting policy and is disclosed accordingly.

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CHAPTER-10

INVENTORIES AND THEIR VALUATION

The separate classification and measurement of inventories are necessary because of their significance as a basic resource of many firms and because the basis of valuation of inventories has a direct effect on the reported income and the funds flow presentations. An evaluation of current and suggested measurement procedures should take into consideration the basic nature of inventories in relationship to the firm's operations, and the objectives and basic concepts of accounting as discussed in the earlier sections of this book. In recent years, emphasis has been placed on the computation of the cost or other input values to be matched against revenues at the time of revenue reporting (usually the point of sale). While an emphasis on net income is not necessarily misdirected, it has led to inventory valuation practices that result in inventory amounts in the balance sheet that have no economic interpretation. One of the objectives of accounting theory should be to provide useful guides in the search for evaluation procedures that will provide better measurements of the inventory resources and better information regarding the potential cash flows of the firm. The objective of this chapter is to evaluate the several bases of the measurement of inventories in terms of their interpretive content and their possible relevance for investment decisions. The several procedures for the matching of input values against related revenues are derived primarily from the traditional accounting structure and are evaluated in terms of that structure, but they are also evaluated in terms of their economic interpretation and their potential relevance for the prediction of future cash flows as well as their information content for capital markets.

THE NATURE OF INVENTORIES

The term *inventories* includes merchandise destined for sale in the normal course of business and materials and supplies to be used in the process of production for sale. Excluded from this category are supplies that will be consumed in nonproducing operations, securities held for resale, but incidental to the operations of the firm, and plant and equipment in use or awaiting final disposition upon termination of use. In the traditional definition, inventories are current assets, because they will normally be converted into cash or other assets within the operating cycle of the business. Obsolete and unsalable merchandise, however, if material in amount, should be excluded from this classification unless it can be disposed of in available markets within normal selling periods.

Inventories are usually thought of as *stocks* of merchandise, although the accounting for the *flow* of the merchandise is usually considered more important. In the traditional accounting structure the stocks at the end of one period are interrelated with the flows of that period, even though they may be residually determined. The valuation of the stocks, therefore, is affected by the matching of the input values with revenues for the period preceding the balance sheet date, and it may also be affected by the matching process of prior periods.

In the valuation process, inventories are different from both monetary assets and prepaid expenses. Monetary assets represent amounts of purchasing power available or to become available at some time in the future. The current value of monetary assets can, therefore, be computed by discounting the expected cash receipts or conversions. Prepaid expenses, on the other hand, represent services to be received by the firm in the process of obtaining its revenue. Generally, there is no possible way of determining the value of these services in terms of the additional revenue to be generated by them. They can be valued only in terms of their acquisition value – a current or past cost. Inventories, however, are between the two extremes. They are not monetary assets, because the amount of cash or the liquid resources to be generated by their sale is usually dependent upon expectations regarding future price changes; but even when prices can be predicted accurately, the timing of the future cash receipts may also be uncertain, making estimates of present values difficult. The validity of output prices for inventories also depends on the amount of additional direct expenses and the use of joint resources and joint activities of the firm required in selling the goods and collecting the proceeds. In this regard, they are similar to prepaid expenses. But generally speaking, the present value of merchandise can be estimated more readily from expected future cash flows than can prepaid expenses.

THE OBJECTIVES OF INVENTORY MEASUREMENT

The most common objective of inventory measurement is the attempt to match costs with related revenues in order to compute net income within the traditional accounting structure. This emphasis on the computation of income based on the reporting of revenues at the time of sale requires an allocation of cost or other basis to the period of sale of merchandise. Thus, the relationship of inventories to the process of income measurement is similar to the common characteristics of prepaid expenses and plant and equipment. This requires the valuation of inventories on the basis of an input price, and the assignment of this valuation to cost of goods sold on some explicit or implicit pricing and flow assumptions. However, the use of output values (sales prices) may also meet the objective of income measurement under certain conditions.

A second objective of the measurement of inventories is frequently stated to be the presentation of the value of the goods to the firm. This value is generally assumed to be the net difference in the value of the firm with a specific asset compared to the value of the firm without it. For assets that are readily replaced, the value of the asset is close to the replacement cost; but the loss of some inventory items would result in a reduction of production or sales, so their value may be greater than their replacement cost. For other items of inventory, their value may be less than replacement cost. The important objective is that the measurement be subject to interpretation and that the intended interpretation be made clear. For example, the current cash equivalent can be interpreted as the amount that the firm can receive in the liquidation of its inventories in the ordinary course of business. The current replacement cost permits the interpretation as the amount of cash the firm would have to hold if it did not possess the goods but had to acquire them.

A third objective is to present information regarding the inventories that will help permit investors and other users to predict the future cash flows of the firm. This can be accomplished from two points of view. First, the amount of inventory resources available will support the inflow of cash through their sale in the ordinary course of business. Second, the amount of inventory resources available will, under normal circumstances, have an effect on the amount of cash required during the subsequent period to acquire the merchandise that will be sold during the period. The inventory should be measured in ways that will aid in the prediction of both the inflows of cash from sales and the outflows required for the acquisition of the merchandise. The fourth objective is to abide by the legal aspects given in Act or Acts. In India, for example, The Schedule VI of the Indian Companies Act, 1956 is the import part for inventories. It requires the details of quantities of each category of goods and the methods of their valuation. The valuation methods of materials finished goods and work in progress are required to be disclosed in the financial statements of the firm. AS-2 (R) also has laid down certain norms for accounting and valuation policies for inventories. This point is explained in the last of this chapter under the title AS-2 (R).

THE DETERMINATION OF INVENTORY QUANTITIES

The computation of inventory valuation and the calculation of the cost or other value to be matched with current revenues requires both a determination of physical quantities and an assignment of a price to each item. A large number of homogeneous articles and the continual flow to customers or into production is a common characteristic of inventories. Thus, the quantity determinations are just as important as the assignment of unit values. The most common methods of determining quantity are : (1) the use of a periodic count of inventory of hand, (2) a perpetual record of each item, (3) a combination of periodic and perpetual methods, and (4) methods of determining total value amounts by aggregative relationships.

A count of merchandise on hand is usually considered a necessary prerequisite to the audit and presentation of unqualified published financial statements. If beginning and ending inventory quantities are accurate, it is generally assumed that net income is properly determined. But it should be kept in mind that the quantity sold is a residual computed by subtracting the amount remaining at the end of the period from the total available during the period. This residual may include quantities lost by theft, evaporation, spoilage, or other causes. With the all-inclusive concept of income, the separation of the quantity sold from the quantity lost is not important; but if the loss is to be reported separately as an expense or as an extraordinary item, the periodic inventory method alone is not sufficient.

A perpetual inventory procedure has the opposite effect. The quantities sold or used are determined from the records, and all items not sold are assumed to be on hand at the end of the period. Thus, any losses are included in the ending inventory. The result is that if there are losses, the inventory valuation in the balance sheet is overvalued and the all-inclusive net income is overstated. Thus the best procedure is obtained when a perpetual system is maintained but verified by a count at the end of each accounting period. Although this procedure may not disclose the cause of losses, at least the quantities sold and the quantities lost would be known separately.

The aggregative methods, particularly the gross profit method and the retail inventory method, will be discussed under the topic of pricing. It should be noted at this point, however, that these procedures have some of the same difficulties as the periodic method, but they are supplemented by periodic inventory counts.

THE DETERMINATION OF INVENTORY VALUATION

As the primary objective of the measurement of inventories is to present information that will permit investors and other users to predict the future cash flows to the firm, inventory valuations that reflect the expected future net receipt of funds should be relevant for this objective. Output values may also be relevant in permitting an interpretation of inventory measurements as representing the value to the firm, particularly under conditions where the firm can sell its entire stock without altering its prices (that is, where the demand for the products is elastic). But

when selling prices or other conversion values are highly uncertain, some measure of cost or other input value may permit a better interpretation of inventory valuation and also permit better information for the prediction of future cash requirements for the acquisition of merchandise for sale.

OUTPUT VALUES

Inventories appear at various stages in the operating process of a business. In some cases they appear at the beginning of the process, as raw material or as a semifinished product with considerable economic activity still required before they can be transferred to customers. In other cases, very little additional economic activity is required. While in the former case input values may be appropriate, in the latter case the crucial events have occurred, so that inventories should be valued in terms of their current or expected output values in order to meet the income reporting objectives and to present a description of resources related to the expected future receipt of cash. The types of output values appropriate in this case would include (1) discounted money receipts, (2) current selling prices, and (3) net realizable values.

Discounted money receipts. Two important facts must be known before inventories can be valued in terms of the discounted future money flows. First, the amount to be received by the future a sale or exchange of the merchandise must be definite or determinable with a reasonable degree of certainty. Second, the timing of the expected cash receipts must be fixed or fairly definite. Very seldom are these facts known with reasonable certainty, except when merchandise is produced and sold under specific contracts. But if merchandise is held for future delivery under a contract with specific terms regarding price and payment, the inventory should be treated as a receivable and valued accordingly.

Current selling prices. An exception to the usual realization rule is permissible in the valuation of commodities at selling prices when there is an effective government-controller market at a fixed price. The two necessary characteristics are : (1) the existence of a controlled market with a fixed price applicable to all quantities brought to the market and (2) no material costs of selling. A further requirement would be that there is little expected delay in receiving the sale price in cash, so that any interest (discount) is not a material factor in the measurement of income.

A similar situation may exist where there is a delivery contract with little delay in collection. In these cases, the firm's product is completed and any additional effort is negligible. The revenue should be reported, and the selling price is the best measure not only of the revenue but also of the funds to be received in exchange for the good.

Net realizable values. One of the most important aspects of income determination in the traditional accounting structure is the proper matching of revenues with costs or other input values. Therefore, whenever output values are used in the measurement of inventories, additional costs of completion or sale and collection should be estimated and recorded in the period in which the revenue is reported. An alternative is to deduct these estimated future costs and expenses directly from the output value in arriving at a *net realizable value* of the inventory. *Net realizable value* is, therefore, defined as the current output price less the current value of all additional anticipated incremental costs and expenses (exclusive of tax effects) relating to the completion, sale, and delivery of the merchandise. Additional expenses of collection should also be deducted, if material.

Sprouse and Moonitz stated that "..... inventories which are readily salable at known prices with negligible costs of disposal, or with known or readily predictable costs of disposal, should be measured at net realizable value " They suggested further that this should not be an exception to usual acceptable valuation procedures, but rather, it should be considered "..... in keeping with the major objectives of accounting." *Bulletin No. 43*, on the other hand, stated that " only in exceptional cases may inventories properly be stated above cost." According to this source, cost is the primary basis for inventory valuation.

Because of this difference in approach to the concept of net realizable value, the two above sources present different conditions required for its use. As to be expected, the conditions proscribed by *Bulletin No. 43* are more restrictive than those proscribed by Sprouse and Moonitz. In *Accounting Research Study No. 3*, Sprouse and Moonitz stated two basic conditions, both of which are necessary : (1) inventories must be "readily salable at known prices," and (2) additional costs must be known or readily predictable. These conditions are consistent with the objective of recognizing revenue whenever it has been earned as a result of the firm's activities and whenever it can be measured objectively. The term *known prices*, however, should not be interpreted as known with certainty. Even government controlled prices may be subject to change. But the amount of the anticipated revenue (based on current sales prices) should be readily determinable with a reasonable degree of certainty.

The conditions required by *Bulletin No 43* for stating inventories above cost are as follows: (1) immediate marketability at quoted prices; (2) interchangeability of units; (3) deduction of additional expenditures to be incurred.

disposal; and (4) difficulty or inability to estimate appropriate costs. This last condition is not required for "precious metals having a fixed monetary value and no substantial cost of marketing." The first condition, immediate marketability, implies that the product must be completed so that substantially all of the value has been added; external quoted prices are required because of the desirability of objective evidence. The condition of interchangeability of units is stated in order to assure that the quoted market prices are applicable to the merchandise in question. But actually, if the first condition holds, the second condition is either true by definition or it is unnecessary. That is, marketability implies that the specific goods can be sold at the quoted prices, regardless of whether the quoted prices refer to the specific goods only or to interchangeable goods.

The condition that exceptions to cost must be justified by an inability to measure costs stems from rigid adherence to the cost basis in Bulletin No. 43. Except in the case of precious metals, it is assumed that revenue should not be reported until realization at the time of sale, but it is permitted earlier as a necessary expedient. Thus, the main reason why selling prices are used in practice for some products is the inability to measure costs. However, the author's opinion, consistent with that of Sprouse and Moonitz, is that the inability to compute costs is not a logical basis for using net realizable value. If the net realizable value can be measured objectively, it should be used regardless of whether costs can or cannot be computed.

One of the major difficulties with the net realizable value concept is that it is usually quite difficult to estimate the additional out-of-pocket costs necessary to complete, sell, and deliver the product. As an alternative, a normal gross margin is frequently deducted from selling price to be sure that all possible additional costs are taken into account; but this may approximate an input value if the additional expected costs are not large.

Another difficulty with the net realizable value concept is that the net income from the transaction is reported before all of the activities of the firm relating to the sale have been accomplished. If it can be assumed that value is added by the firm throughout the entire period during which activities relating to the sale are performed by the firm, some of the income will have been reported before it has been "earned": an alternative is to deduct from net realizable value the normal profit on activities yet to be performed. Thus, income would be accrued as the several activities are performed by the firm for the production, storage, selling, shipping, and possibly servicing of the merchandise. The main difficulty with this alternative is in making the allocation of the normal operating income to the various activities. Ideally this could be accomplished by making the allocation on the basis of the value added by the firm in the several activities, but an allocation on the basis of total costs incurred and expected might be a reasonable alternative in many cases. Because of these difficulties of measurement, the arbitrariness of the allocations and the little advantage of the extra refinement, this approach should probably remain a theoretical ideal rather than a practical goal.

INPUT VALUES

As applied to inventories, input values may be defined as some measurement of the resources used to obtain the inventory in its present condition and location. When the consideration given for the inventory is cash or its equivalent, the interpretation of the input value is fairly clear. However, when merchandise is manufactured, the input value of the inventory represents a summation of the valuations of resources used in production and other resources assignable to the product. Because of the necessity for allocations of resource valuations to periods and the reallocation to departments and products, the interpretation of the final input valuation of the product is difficult. Furthermore, the use of allocation procedures diminishes the possibility that the inventory valuations will be relevant in the prediction of cash flows or directly in investment decision models.

In the traditional accounting structure, the difference between the input values and the output values of the product sold, generally referred to as the gross profit or gross margin, should represent the nonproduct input values of the firm plus the profit or minus the net loss to the firm. The effect of all input valuation methods is to defer the recognition of revenue and net income until a later period. This delay in the recognition of revenue is justified whenever considerable services are yet to be performed by the firm or whenever verifiable output values cannot be obtained.

Input values are generally expressed in terms of historical costs, but they can also be expressed in terms of current costs or standard costs. Current costs can often be estimated by starting with net realizable value and subtracting a normal gross margin (normal markup). The lower-of-cost-or-market rule has its own peculiarities, but it is classified here as an input valuation method because the term *market* as used in this context is basically an input concept.

Historical cost. The validity of historical costs rests on the assumption that they represent the input value of the resources obtained at the time of acquisition or use in the process of production. They are measured by the net monetary payment made in the past or to be made in the future in the acquisition of the goods or services. If payment is to be made in the distant future, the amount should be discounted to obtain the present cost. When nonmonetary assets are exchanged for current goods or services, the current value of the nonmonetary assets represents the cost

of the goods or services acquired; but accountants generally go back to the original monetary payment for the asset given up in the exchange. Thus, historical cost generally means the monetary consideration paid or to be paid in the acquisition or production of merchandise, including all of those services necessary in obtaining the merchandise in a salable state.

Care must be taken, however, to exclude from historical cost payments not intended or anticipated by the buyer at the time of the purchase decision. Costs should include only that amount which the purchaser considered the item to be worth to him at the time of purchase. The mere fact that a cost is incurred does not justify including it in the initial asset value.

According to the traditional historical cost model, costs of production should include the normal direct costs of material and labor and the normal indirect costs that can be allocated to the product on the basis of logical association. Normal wasted material and normal idle labour time are logical costs of production, but excessive material waste and abnormal amounts of idle time are not costs of production but losses to the firm. What are normal and what are abnormal uses or resources depends, of course, on the production standards of the firm. But, within given limits, necessary production costs can be determined from existing engineering and institutional standards of performance.

Similar concepts of cost can be applied to the acquisition of retail merchandise. Normal costs of transportation, storage, and handling should be included as a part of total inventorable costs. But excessive costs of shipping because of the acquisition of inefficient lot sizes, or excessive costs due to reshipping or rehandling, should be excluded from inventory valuations.

The advantages of historical cost for the valuation of inventories can be summarized as follows :

1. For inventories of raw material and newly acquired merchandise, little value has been added by the firm's activities, so that cost represents a measure of the quantity of resources available.
2. When selling prices are highly uncertain or when additional costs cannot be predicted with reasonable accuracy, a net output value cannot be estimated. Cost thus serves as a reasonable alternative to net realizable value.
3. Cost is based on a past exchange transaction; therefore, it is considered verifiable and not subject to the biases of management or the accountants.
4. Because costs is measured by the value of the consideration given at the time of acquisition of the merchandise, there should be evidence that the purchaser considered the cost to represent the value to the firm at that time; with prudent management, it can generally be assumed that the willingness or intent to pay the specific amount is evidence of what management considered to be its value.
5. Valuation in terms of cost permits the accountability for cash and other resources used in acquiring the products and accountability for the inventory.

Some of the major disadvantages of historical cost are as follows :

1. While cost may represent value to the firm at the time of acquisition, it soon becomes outdated; not only do input prices change over time but also the value to the firm changes as value is added by the firm.
2. When two or more items in the inventory are acquired at different times, the costs are not comparable because they do not necessarily relate to the same value of money; their addition may not result in a meaningful sum.
3. Many cost computations require the allocation of joint costs, and even the best allocation methods are inadequate in reflecting causal relationships.
4. Because costs are historical, the matching of costs with revenues does not provide a meaningful measure of the results of current operations.

The authority for cost as the basis for inventory valuation is deep rooted in current accounting principles. In fact, for many years, it has been considered the only acceptable basis for most inventories, except when the lower-of-cost-or-market rule is applicable. For example, *Bulletin No. 43* states that historical cost is the primary basis of measurement for inventories in financial accounting.

Current costs. In an attempt to avoid many of the disadvantages of historical costs, current cost for inventory valuation have been suggested by several writers and committees for the following reasons: (1) It permits a matching of current input values with current revenues to measure the result of current operations. (2) It permits the identification of holding gains and losses, thus reflecting the results of inventory management decisions and the impact of the environment on the firm not reflected in transactions. (3) It represents the current value of the inventories at the end of the period if the firm is still acquiring such merchandise and if net realizable values are not applicable. (4) It permits

the reporting of current operating profit, which may be used to predict future cash flows.

The general objectives of current costs as well as its advantages and disadvantages are discussed in separate Chapter. A specific advantage of the application of current costs to inventories is that it eliminates the need for an assumption regarding the actual or artificial flow of merchandise or costs. Thus, the application of FIFO, LIFO, or weighted average methods is unnecessary.

Some of the disadvantages of current replacement costs are as follows: (1) Current costs or quotations are not available for seasonal and style items and for goods produced by obsolete methods. Estimates of the current input values of these items may, therefore, be subjective in nature. (2) Changes in current costs do not always reflect changes in current selling prices. Values do not necessarily change because of changes in costs. (3) Increases in costs would result in gains recorded in the current period (through the holding of inventories) even though they have not been realized through sale. For Example, an increase in labor costs would appear to be profitable in the current period even though sales prices have remained stable. (4) Gains and losses caused from changes in specific input prices would be included in the net income from operations unless the cost of sales, as well as the ending inventory, is valued in terms of costs current at the time of sale.

A major qualification with respect to the usefulness of current replacement costs is that they may be irrelevant in those cases where the firm would not have acquired the items if it had to do so at current prices. For example, if merchandise is acquired at a low price because of liquidation of a supplier's stock or for other special reasons, the current replacement cost in the regular markets may be irrelevant. The net realizable value of the merchandise, in this case, is dependent on the expected sales prices, and this is more relevant than the current cost when the firm would not acquire the goods at this prices. Also, the trading margin representing the difference between the expected sales price and the current cost has no significance either to the firm or to readers of financial statements.

Net realizable value less a normal markup. When replacement costs are not available, they can sometimes be estimated by subtracting a normal gross profit margin from the net realizable value (estimated selling price less additional expected incremental costs). Before this procedure can result in a good approximation of current cost, however, there must be a direct relationship between costs and selling prices. If these do not move together, the result will not be an approximation of current costs. The normal markup assumed, of course, must also apply to the specific items in question as well as to the original items from, which they were derived.

Net realizable value less a normal markup is also occasionally suggested as a measure of the net value of the inventory to the firm when this value is below historical cost and current cost. The assumption is that a loss should be recorded currently and the normal profit should be permitted when the goods are sold. However, this is an incorrect usage of the concept. While this method is often used in the valuation of used equipment received by an equipment dealer as trade-ins on new equipment, it must be recognized that the trade-in allowance does not necessarily represent cost. In most cases, valuation at net realizable value alone would be more appropriate.

In the application of the lower-of-cost-or-market rule, replacement cost does not represent the current utility to the firm when it is below net realizable value less a normal markup. The application of the concept in this context is discussed further below.

The lower of cost or market. As discussed earlier, the lower-of-cost-or-market rule is internally inconsistent and is not a logical basis for the valuation of inventories. But since it has received such widespread support over the years, it is important to understand the logic or rationalization of the rule. The following discussion pertains primarily to the concepts applied in *AICPA Bulletin No. 43* in the valuation of inventories. Because *market* is initially defined as replacement cost, we have chosen to classify it here as an input valuation method, although in some cases it is an eclectic method, reflecting output values at some times and input values at others.

While federal income tax regulations have consistently defined *market* as the current bid price for the specific item as generally purchased by the taxpayer, accountants have looked more at the utility value of the merchandise. Sanders, Hatfield, and Moore, for example, defined *market* as "the cost of reproduction or replacement, unless the realization prices are lower, in which case they would govern."

AICPA Bulletin No. 43 extended the concept of utility by stating that "... in accounting for inventories, a loss should be recognized whenever the utility of goods is impaired by damage, deterioration, obsolescence, changes in price levels, or other causes." In measuring utility, however, it defines *market* as replacement costs, but with both an upper and a lower limit. The upper limit (ceiling) is net realizable value; utility to the firm cannot exceed the expected sales price less additional costs of completion and disposal. The lower limit (floor) is net realizable value less a normal profit

margin. No loss should be recognized if the fall in replacement cost does not reflect a similar fall in expected sales price. That is, a loss should not be recognized in the current period if it will result in the recognition of an abnormal profit in a later period. The existence of the potential abnormal profit is evidence that the loss was overstated. Note, however, that any write-down below net realizable value results in the creation of profit in the following period equal to the amount of the reported loss in the current period.

The following example describes this procedure :

Case	Cost	Market		
		Replacement cost	Net realizable value (ceiling)	Net realizable value less normal profit margin (20 percent) (floor)
	Rs.	Rs.	Rs.	Rs.
A	1.00	1.04	1.20	0.96
B	1.00	0.96	1.10	0.88
C	1.00	0.80	1.05	0.84
D	1.00	0.92	0.90	0.72

In case A, cost is below replacement cost and net realizable value, so there would be no adjustment of cost. Note that the gross profit to be recognized in the period of sale (assuming no additional changes in prices) will be less than normal. But it would be incorrect to show a loss in one period just so that a normal profit could be reported in a later period. As Moonitz and Jordan so aptly phrased it, "to write down assets in order to be able to book a subsequent 'profit' appears to be dangerously close to manipulation of the accounts."

In case B, replacement cost would be chosen because it is below cost and between the upper and lower limits of market. There is some question whether the net utility to the firm has really fallen when net realizable value is still above cost, however. But if net realizable value is quite uncertain, replacement cost may be the best measure of utility to the firm.

In case C, replacement cost is below historical cost, but if it is used in the valuation of the inventory, the resulting expected profit in the subsequent period would be greater than normal. Therefore, the net utility to the firm is assumed to be not less than the net realizable value less a normal markup. This, however, results in a normal reported profit in the subsequent period as a result of the current write-down.

In case D, replacement cost is below cost but above net realizable value. Since the utility to the firm cannot exceed net realizable value, this should be used as the market valuation. However, the valuation should not be reduced below net realizable value just so that a profit can be recorded in the period of sale.

Bulletin No. 43 recognized that these concepts cannot generally be precisely determined but that they should be used as a basis for judgment. However, if all of the valuation concepts can be measured with equal certainty, the rule is internally inconsistent. The best measure of utility to the firm is net realizable value in all cases where this can be measured with a reasonable degree of certainty. Cost is relevant when no value has been added by the firm or when the sales price is highly uncertain. As a measure of current input value, however, replacement cost is more significant, both as a measure of current utility valuation and as a means of matching current costs with current revenues. This leaves "net realizable value less a normal profit margin" with very little support. Its reliability is based on the certainty of net realizable value; but as indicated above, if net realizable value can be measured with reasonable certainty, it should be used as the inventory valuation. The only possible case for "net realizable value less normal profit margin" is where the sales price is fixed by contract or a stable market but most of the services relating to the sale are still to be performed by the firm. However, the concept and measurement of "normal profit margin" are generally nebulous and imprecise, with the result that replacement cost is probably more accurate in these cases.

The cost-or-market concept when applied to inventories is tied closely to the concept of realisation of revenue at the

time of sale, but with the recognition of loss as soon as evidence of the loss appears. But even in this context, it has been criticized severely by many writers. The major objections can be summarized as follows: (1) It violates the concept of consistency because it permits a change in valuation base from one period to another and even within the inventory itself. (2) It has been said to be a major cause of distortion of profit and loss, (3) Although it may be considered conservative with respect to the current period, it is unconservative with respect to the income of future periods. (4) The current period may be charged with the results of inefficient purchasing and management, which should be included in the measurement of operating performance at the time of sale. However, it may also be argued that these should be recorded in the current period rather than in the period of sale. (5) An increase in the market price in a subsequent period may result in an unrealized gain if the original cost is always used as the basis for comparison with the current market price (assuming, of course, that market in both periods is below the original cost). This would not be the case if the inventory valuation at the beginning of the period is considered "cost" for subsequent accounting purposes regardless of the computation in arriving at this valuation, as recommended by *AICPA Bulletin No. 43*. (6) The cost-or-market rule is said to permit excessive subjectivity in the accounts. This is based on the assumption that market is always more subjective than cost.

Standard costs. Current standards reflect what a product should cost to produce under current conditions of prices and technology and with a desired standard of efficiency. Current standard costs, therefore, resemble replacement costs, with the exception that costs of inefficiency and idle capacity are excluded. However, replacement costs may also exclude some of these costs that are unnecessary in the production process. The main difference is that standard costs are determined independently of past production techniques, on a scientific basis, while current replacement costs may be computed by applying current factor prices to past production techniques.

There is always a danger that when standard costs are used for inventory valuation purposes they may not reflect current conditions unless they are revised frequently. Thus, they are often considered undesirable for inventory valuation purposes because they tend to represent neither current costs nor historical costs. They are admittedly useful for control purposes and for other managerial uses, but they are considered undesirable for valuation purposes because they are thought to be more subjective than either historical costs or replacement costs. An additional objection is that if actual costs are less than standard costs, the valuation at standard results in the recognition of increases in value before the point of sale.

AICPA Bulletin No. 43 states that "standard costs are acceptable if adjusted at reasonable intervals to reflect current conditions so that at the balance sheet date standard costs reasonably approximate costs computed under one of the recognized bases." Such recognized bases would include average cost and first-in, first-out. The implication is, however, that standard cost should not be used to reflect current replacement cost. It is the author's opinion that one of the major advantages of standard costs in the valuation of inventories may be that they can be used to reflect current production costs under efficient and normal conditions.

Normal-stock valuation. The base stock and last-in, first-out inventory methods are frequently classified as normal-stock methods. The main common attribute of these methods is that the inventory valuation represents an arbitrary amount or a residual of previously incurred costs. There is no pretense that they represent either the utility of the inventory to the firm or costs that should be matched against some future revenue. As a result, they cannot be said to represent true input valuation methods.

The main objectives of the normal-stock methods are to match current costs with current revenues and to remove "paper" profits and losses arising from the changes in inventory' prices. The original base stock method was founded on the assumption that a normal quantity of inventory was necessary as a part of the permanent investment of the firm, and therefore it should be treated as a noncurrent asset. As a noncurrent asset no profit or loss arising from changes in prices should be recognized until the base stock is finally sold, presumably when the firm is liquidated. Current operating profit is assumed to arise from purchase in excess of the normal base inventory.

In the original base stock method, the base inventory was to be written down at the time of acquisition to an amount below that to which any future replacement cost could be expected to fall. The amount of the write down was considered to be a capital adjustment charged to retained earnings. Modifications of the base stock method place a valuation on normal inventory in terms of the historical cost when it was first acquired. Amounts held in excess of the normal are recorded on the basis of an average cost, first-in, first-out, or last-in, first-out. When the last-in, first-out method is used, it becomes very similar to the current application of LIFO.

The inventory valuation is, therefore, a residual amount set at some arbitrary low level or determined by the costs occurring at the time the method happened to have been started. The result is that net assets are understated and the recognition of gains from price increases relating to the normal inventory or the LIFO base is deferred almost indefinitely. Since the normal inventory quantities are not intended to be sold, it was thought that gains from price increases were not "realized". This reasoning is related to two other objectives: (1) Under the replacement theory, income is assumed to arise only if the revenues from sale exceed the replacement cost of the goods sold. The replacement goods are assumed to carry the same valuation as the goods they replace. (2) The relevant income is assumed to be the disposable income arising from the excess of revenues over replacement costs. Cash is available for dividends only after inventories have been replaced. Unrealized gains and losses arising from the holding of a normal-stock inventory do not affect the amount of cash available for the payment of dividends. Note that the objective is to report net income based on the replacement cost concept of capital maintenance rather than a money investment concept.

As a basic concept of inventory valuation, the normal-stock methods are objectionable for the following reasons: (1) The inventory valuation does not begin to approximate the utility value to the firm. (2) Inventories acquired at different times and inventories of different firms are not expressed in comparable terms. (3) Because the inventory amounts represent residual valuations, they do not represent either input or output valuations and therefore they are not comparable with other items in the balance sheet. (4) In the computation of net income, they do not permit the inclusion of all gains and losses.

Although the base stock method has never gained widespread acceptance, it has been given some formal recognition. In the 1930s, recognition

was given by the American Institute of Accountants (AICPA) and by Sanders, Hatfield, and Moore; the latter accepted the base-stock methods for specific industries as a proper basis for arriving at cost, but they also recognized that it "frankly abandon(s) the usual basis of keeping inventories within the cost or market area." *Bulletin No. 43* does not include the base stock methods among the acceptable cost methods, but it does include last-in, first-out. Because of this, and its acceptance for federal income tax purposes, LIFO has become a commonly accepted method in the United States. Its appropriateness in matching costs against revenues is discussed at greater length later in this chapter.

WHAT SHOULD BE INCLUDED IN COST ?

Cost is a measure of the value of the inputs necessary in the acquisition of material or merchandise in its present condition and location. The value of the inputs, in turn, is measured by the value of the consideration given up in acquiring them. The questions still to be answered, however, are these: What costs can be considered necessary? What costs can be associated with merchandise and therefore with future revenue? What costs should be considered period expenses?

What costs are necessary is a matter of judgment. The accountant must use either an engineering standard or some other basis for comparison in making this judgment. *Bulletin No. 43* suggests that the concept of normality can be used as an acceptable basis: "... under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so *abnormal* as to require treatment as current period charges rather than as a portion of the inventory cost." The American Accounting Association committee, on the other hand, suggested that only costs *reasonably traceable* to the product should be included in acquisition costs.

There is some similarity between the concepts of normality and traceability. Many of the abnormal costs cannot be

traced to specific products. For example, the costs of idle capacity and excessive spoilage of raw materials or finished product cannot be traced to the production of specific products. They are not costs of producing anything. But presumably, costs of inefficiency in production can be traced to the product even though they are abnormal in nature. Thus, the AAA Committee concept of cost is somewhat broader than that of the AICPA. Although the concept of traceability is an important aspect of cost assignment, abnormal costs are not really input values, but rather losses to the firm.

Summary of valuation bases

<i>Base</i>	<i>Extent of revenue and income reported</i>	<i>When applicable*</i>
I. Output values :		
A. Discounted money receipts	All revenue reported except interest.	1. Sale price known. 2. Timing of cash receipts known.
B. Current selling prices	All revenue and gains and losses included.	1. Sale price known. 2. Collection period short.
C. Net realizable value	All net revenue reported.	1. Same as B. 2. Costs of disposal are known or predictable.
II. Input values :		
A. Historical cost	No recognition of operating revenue or gains and losses from changes in specific prices until time of sale.	1. When historical costs are close to current costs. 2. When selling prices are highly uncertain.
B. Current replacement costs	Gains and losses from changes in specific prices included in income. Operating revenue not included.	When current costs can be measured objectively.
C. Net realizable value less a normal profit margin.	All value changes included in income but with deferral of normal gross profit.	As an approximation of replacement cost or as a minimum valuation when it is above replacement cost. Not recommended as a standard.
D. Lower of cost or market.	Income includes losses but not gains from specific price changes. Operating revenue reported only at time of sale.	Although currently acceptable, it has little justification in current accounting theory.
E. Standard cost.	Income includes abnormal gains and losses arising from inefficiency or idle capacity. Operating revenue reported only at time of sale.	To reflect current production cost under efficient and normal conditions.
F. Normal-stock valuation.	The effect on income is similar to the use of replacement costs except that there is no recognition of gains or losses from specific price changes relating to the base of normal-stock inventory.	Although LIFO is currently acceptable for income determination, it results in a distortion of inventory valuation.

* Assuming an objective of the prediction of future cash receipts or future cash requirements.

The substitution of current replacement costs for historical costs does not avoid the problem of determining what costs are necessary. Costs expressed in current terms must still be classified as normal or abnormal and as traceable or not traceable to specific products. Current costs, however, require a closer focus on the necessary costs of production or acquisition. The substitution of current costs of inefficient production for historical costs of efficient production is not an improvement in valuation procedures.

The second basic question—what costs should be associated with the inventory valuation and thus be matched with future revenues—is an even more difficult problem. *AICPA Bulletin No. 43* is not explicit on this point. It states that general and administrative expenses should not be included in product costs unless they are clearly related to production. It also states that “. . . the exclusion of all overheads from inventory costs does not constitute an accepted accounting procedure.” But this does not define what overhead costs should be included. The ambiguous nature of this statement has resulted in the proponents of both full absorption costing and direct costing claiming formal acceptance by the AICPA. Certainly full costing is acceptable, as there is no requirement that any normal manufacturing overhead be excluded from cost. On the other hand, the proponents of direct costing claim that since it includes variable overhead costs, direct costing is an acceptable method.

The question of which costs should be included in the measurement of inventories has generally been answered within the historical cost accounting structure on the basis of the matching concept. That is, costs are allocated to the inventory if there is an assumed association between such costs and the revenues of future periods. This allocation, however, is necessarily arbitrary and is generally resolved by the use of allocation rules applied consistently. Thus, the accounting structure can be designed to be consistent with either variable costing or full costing. The choice must be made on other than structural logic.

In an attempt to attain economic interpretation of product costs, it can be assumed that as long as costs are current, they represent value to the firm because the inventory could not be obtained without incurring the costs. While generalizations are always subject to exceptions and modifications, it is probably safe to state that costs should be added to inventory valuations to the point at which the merchandise is in the proper condition and location for sale or transfer to customers. In addition to specific manufacturing costs, this would include necessary costs of shipping, storage, and handling in bringing the merchandise to the store, display room, or warehouse. The inability to trace some of these costs, however, may necessitate their treatment as period expenses. If the turnover period is short and if these costs are not a substantial part of acquisition costs, inventory valuation and income determination will not be materially affected by the treatment of these costs as period expenses. Costs incurred in selling the product and in shipping the merchandise to customers, in many cases, can also be considered as increasing the inventory valuation. But since the selling prices should be available at this time, a better economic interpretation could be obtained by using the net realizable value.

From the point of view of using the inventory valuations as predictive indicators and as inputs into decision models, it would appear that variable costs might be more appropriate because they are more closely associated with cash flows and because they avoid the use of most arbitrary allocations required for full costing. Little is known about decision models, but under certain assumptions it appears that the classification of costs by their behavior and predictive ability might be more relevant than classification by product association.

THE ASSOCIATION OF COSTS WITH INVENTORIES AND COST OF SALES

In spite of the theoretical difficulties with historical costs, they continue to be used widely (almost universally in the United States and many other countries) for the measurement of goods sold in the computation of net income. Therefore, we should evaluate carefully and critically the several methods used to allocate the identified product costs with the specific quantities of merchandise sold and the specific quantities on hand. Note that all methods of allocation rely upon certain basic assumptions which may or may not be valid. The most universal assumption is that when homogeneous units are acquired in a single lot or in different lots at the same quoted price per unit, the amount allocated to cost of goods sold must be the same for each unit of product. That is, it is assumed that when the unit prices of a product do not change, all cost methods would result in the same valuation for inventories and net income. However, it may be argued—on the basis of a diminishing utility value of goods, for example—that some units actually cost more than others even though the quoted price is the same for all. This is particularly true where, for example, the goods must be acquired in lots of 100 and only 60 are required for the main objective, but the other 40 can be used as a substitute for other goods of varying lower quality and cost. Therefore, all cost methods are arbitrary to some extent in the allocation of costs between goods sold and those not sold.

Even if we can assume that each unit in a lot of homogeneous goods should be assigned the same cost, the usual

pattern is that homogeneous units are frequently acquired at different prices, so that the problem of associating these costs with goods sold and goods not sold is difficult not only on pragmatic grounds but also because of the different theoretical objectives of association. Accountants have attempted to solve this problem by setting up specific rules of association based on certain assumptions of product flows, cost flows, and inventory valuation. The most common methods of association include (1) specific identification, (2) average cost methods, (3) first-in, first-out, (4) normal-stock methods, (5) retail inventory methods, and (6) gross profit method. The accountant must choose among these methods on the basis of existing conditions and specific objectives. The following discussion will evaluate these several methods in terms of their effects and specific objectives.

The objectives of cost association

The main objectives of cost identification for inventories have been the matching of costs with revenues and the association of costs with inventories for balance sheet valuation purposes. When costs are changing over time, however, these objectives are imprecise, because they do not specify which costs should be associated with the goods sold and which should be associated with the inventory. Therefore, accountants have looked to more basic objectives, which place emphasis on either the costs of goods sold or the ending inventory, or attempt to give equal attention to both. These objectives can be summarized as follows:

1. Costs should be identified as closely as possible with each unit of merchandise. This accomplishes the result of providing for a matching of the specific costs of each unit with its revenue and also the identification of specific costs of the merchandise in the inventory. This objective is based on the assumption that each unit of product represents a specific venture; the income of the venture should be measured by the difference between the specific costs and revenue, and therefore the specific costs of the venture should be carried forward in the inventory until the revenue is reported.
2. The operations of the firm may be viewed as a continual series of transactions rather than as a series of separate ventures. The emphasis is, therefore, on considerations other than the physical flow of goods. If the determination of current income is considered more important than the valuation of the inventory, emphasis is placed on the matching of current costs with current revenues; the inventory is considered to be a residual of historical costs. The inventory is not valued in terms of current costs, but it is argued that this is unimportant and will not affect the computation of current income of any period so long as the firm continues to maintain its inventory at the same level in the future. Another argument is that an emphasis on this objective permits the computation of current operating income and the exclusion of "unrealized" gains and losses from price changes relating to the basic inventory.
3. A third objective places the emphasis on the need for a current valuation for the ending inventory which is then assumed to permit better economic interpretation. The inventory is assumed to be continually replaced, and the best valuation method is assumed to be one that is based on the most recent acquisition costs. The resulting net income for each period, therefore, includes all gains and losses from price changes relating to the goods assumed to have been sold.
4. Another objective is to identify the gains and losses from price changes and measure separately the income arising from the buying and selling operations. A strict adherence to cost, however, cannot accomplish this completely. A replacement cost or some other measure of current prices must be introduced. Operating income results from the matching of current costs with current revenues, and the gains and losses from price changes can be measured by comparing current costs with historical costs.

Supplementary Statement No. 6 of the AAA Committee on Accounting Concepts and Standards proposed that the first objective listed above is the ideal. It stated: "Ideally, the measurement of accounting profit involves the matching precisely of the identified costs of specific units of product with the sales revenue derived therefrom." In preparing *Supplementary Statement No. 6*, the committee recognized that where specific identification was not possible, an assumed flow of costs could be used to approximate the matching of identified costs with revenues. However, the assumed flow of costs should be realistic and reflect the actual movement of goods. Artificial flow assumptions were, therefore, considered inappropriate. The 1964 AAA committee on the matching concept endorsed this concept in its recommendation of the first-in, first-out method as one that most nearly reflects the buying and selling relationship.

The AICPA appears to have endorsed the second major objective listed above. *Bulletin No. 43* states that "the major objective in selecting a method should be to choose the one which, under the circumstances, most clearly reflects periodic income." In the discussion that follows this statement, it is clear that identified cost is not the

objective in inventory valuation, particularly where the identity of specific lots is lost before the time of sale. This is not entirely clear, however, what is meant by periodic income.

The third objective—stating the inventory as close as possible to current prices—has been frequently suggested, but only as one of several objectives.” Since the change in emphasis from the balance sheet to the income statement in the early 1930s, the objective of showing current costs in the balance sheet has been subservient to the income measurement objective. The Study Group on the Objectives of Financial Statements, however, recommended that financial statements should include current values as well as historical costs in order to permit their use as indicators of prospective benefits and for the prediction of prospective cash flows.

The fourth objective, disclosing gains and losses from price changes, cannot be achieved completely by a strict adherence to the cost basis of valuation. The suggestion that replacement cost be substituted for historical cost would, however, provide the basis for meeting this objective. Some of the cost methods do achieve this objective in part; the extent to which this is accomplished is discussed in the following paragraphs.

Specific identification of cost

The first objective of matching specific costs with specific revenues is achieved most precisely by the specific identification of costs. Each unit is tagged with its cost at the time of acquisition, and this is then compared with the sales price when it is transferred to a customer; the difference is assumed to be the gross profit on this specific transaction. On the surface, this method seems ideal; what better method of matching could possibly be found? For unique items and items of high cost value, it is particularly appealing because of the ease of determining and identifying specific costs of specific units. In a small retail store, it is often convenient to record the cost of each item in code on the box or sales tag, so that the cost can be identified when an inventory is taken. When there is a high turnover of a large number of homogeneous items purchased at different lot prices, the bookkeeping is more difficult, or sometimes impossible except with the aid of high-speed computers. But in these cases, the specific identification is the standard, and other methods are used as approximations of specific identification.

A closer scrutiny, however, causes specific identification to lose some of its halo. One of its basic assumptions is that greater precision results from breaking down the operations of the firm into the smallest units possible and computing profits or losses from each of these units. However, the firm is in reality an integrated whole rather than a series of disconnected ventures. As a result, many costs are joint costs, in the sense that they relate to the firm as a whole or to major divisions of the firm. Other costs relate to many lots of heterogeneous products; any attempt to allocate these *joint costs to specific units results in an appearance of precision that is not, in fact, present.* For example, costs of shipping, storage, and handling may apply to groups of items, and any allocation to specific units may be arbitrary. Even discounts and other cost-determining mechanisms may relate to large lots of purchases rather than to specific units.

Another argument against specific identification as a costing procedure is that it permits the manipulation of profits by the business firm. When homogeneous units have different costs, the manager can increase profit by choosing a unit with a low cost or decrease profit by choosing a unit with a high cost. A good example is the buying and selling of corporate stock. One share is just as good as another share of the same class of stock of the same corporation. If several lots are acquired at different prices, the owner may select which lot to sell in order to liquidate only a part of the holdings. The proponents of specific identification as the ideal, however, draw attention to the fact that the business manager is continually making decisions to alter the profit position by selecting which of different items to sell or attempt to sell in certain periods. Note also that if specific identification is used only as a standard for the choice of other methods, the possibility of manipulation is minimized.

In spite of some of the difficulties associated with specific identification, it is a useful goal to provide good matching when alternatives to historical cost are not acceptable as a measure of input value. It should be recognized, however, that the specific identification method results in an income concept that includes operating income and gains and losses from specific price changes. Also, when specific identification is applied to homogeneous units, a flow of goods assumption is made even if the manager does not attempt to direct which items are sold in what order. If the customer is permitted free choice of which item to buy, the result may be that the choice is random; or the customer may choose the most convenient item in front, which may be the oldest item, thus effecting a first-in, first-out flow. Or the customer may choose the item with the least dust on it, thus effecting a last-in, first-out flow.

Average cost methods

The use of averages permits each purchase price to influence the inventory valuation and the cost of goods sold. The assumption is that the buying and selling operation results in the aggregation of costs and the assignment of these costs to goods sold and goods unsold on the basis of a single price. This single price is assumed to be a representative

unit cost of all goods handled during a specific period. No specific flow of goods is assumed, unless it can be said that it represents a random selection of goods by customers so that any item handled during the period has an equal chance of appearing in the inventory at the end of the period. Usually, however, it is not thought to be in agreement with the physical flow of goods but in conflict with it.

Average costs do not reflect either the matching of current costs with current revenues or balance sheet valuations in terms of current costs. In this respect they are somewhat neutral with regard to income determination and balance sheet valuation. But the extent to which they are neutral depends, in part, on how the average is computed. An unweighted average of prices could lead to inconsistent and capricious results, depending on the rapidity of price changes and the timing of acquisitions. A weighted average is generally thought to be more representative than an unweighted average, and a moving weighted average even more appropriate where perpetual inventory records can be maintained. A moving weighted average or a simple weighted average computed for short periods of time may approximate a first-in, first-out flow of goods if the turnover is high and specific lots are purchased frequently. In these cases, it is not entirely neutral in its effects.

First-in, first-out

The first-in, first-out rule is based primarily on the assumption that it is a good approximation of specific identification for most types of goods in most industries. It is thought to be good inventory management to sell or use the oldest units first and maintain a current inventory representing the most recent purchases. Thus, FIFO represents an approximation of the specific flow of goods. As an approximation of the specific identification of unit costs, it has the advantage that management has little or no control over the selection of units in order to influence recorded profits. It also has the advantage of not being influenced by the arbitrary or whimsical choices of customers. As a result, it provides a more consistent and systematic determination of inventory and cost of goods sold, permitting better comparisons among different firms in the same industry and among several years.

A second objective of FIFO is the combining of all elements of profit reported at the time of sale. As with specific identification, it is assumed that no separation can be made of gains and losses arising from price changes and income resulting from managerial decisions in the course of normal operations. It is also sometimes assumed that FIFO does not permit the recognition of unrealized gains and losses (except as possibly modified by the lower-of-cost-or-market rule). But this assumption is based on the proposition that the operating cycle is from cash to merchandise and back to cash again. Others propose that the cycle should be viewed as being from merchandise to cash and back to merchandise, in which case unrealized appreciation is included in income if the ending inventory is recorded at prices higher than those at the beginning of the period.

A third objective of FIFO is the presentation of the ending inventory for balance sheet purposes in terms of the most recent costs, which can be assumed to approximate replacement costs. The closeness of approximation to replacement costs depends on the frequency of price changes and on the stock turnover. When the stock turns over rapidly, the inventory valuations will reflect current prices unless prices change considerably after the recent purchases. But seldom will the inventory valuations under FIFO be identical with replacement costs except accidentally, or under unusual conditions of stable prices from the dates of acquisition of the ending inventory to the date of the balance sheet.

The objectives of matching current costs with current revenues and the separate reporting of gains and losses from price changes are not generally met with the first-in, first-out inventory procedure. Thus, the major objections to the method are expressed in terms of its failure to meet these objectives. There are also serious practical disadvantages to the FIFO method when many lots are purchased during the period at different prices or when goods are returned to stock after subsequent lots have been sold.

Last-in, first-out methods

The normal-stock methods of inventory valuation have as their objectives the matching of current costs with current revenues and the elimination of the reporting of gains and losses from the holding of inventories. Early in the 20th century, the base-stock and reserve methods gained in popularity, largely because they presented a conservative valuation of the inventory for balance sheet purposes. However, they failed to gain widespread acceptance, largely because they were rejected in the United States for income tax purposes. But when the Internal Revenue Codes of 1938 and 1939 gave formal recognition to the acceptability of the last-in, first-out method, LIFO gained rapidly in popularity as a means of attaining the above objectives.

Last-in, first-out. In a few situations, LIFO has been assumed to reflect the specific identification of goods or the normally expected flow of goods. For example, certain nonperishable raw materials such as coal and ores may be

stored in such a way that new acquisitions are placed on top of the pile and amounts transferred to production or use are taken off the top, leaving a semipermanent base inventory that may be used only in emergencies. When goods do not flow in this specific order, the last-in, first-out method is generally referred to as *artificial* LIFO.

Most proponents of LIFO, however, do not consider it to be an approximation of the flow of goods, but rather a logical procedure for other reasons. The main objective is the matching of current costs against current revenues, resulting in an operational concept of income, which excludes gains and losses from the holding of inventories. Although the LIFO method stems from the idea that the base inventory is similar to a fixed asset in that it must be maintained continually throughout the life of the firm, it is not necessary that the inventory be classified as a fixed asset. The basic assumption is that the operations of the firm require an investment in inventories that must be maintained throughout the life of the enterprise. The flow of transactions is assumed to be from inventories to cash to inventories rather than from cash to merchandise to cash; income, therefore, cannot be measured until the inventories have been replaced.

LIFO is claimed to be useful for the following reasons: (1) A matching of current costs against current revenues is facilitated. (2) If prices are rising, the inventory valuation is conservatively stated. (3) Price changes over the business cycle do not result in the reporting of unrealized gains and losses arising from the holding of the initial and increasing amounts of inventory. (4) It permits the smoothing of income over the business cycle if prices are rising and falling. (5) Income is reported only when it is available for distribution as dividends or for other purposes. Holding gains do not represent disposable income. (6) Probably the most impelling reason for the adoption of LIFO in the United States has been its acceptance for income tax purposes. Since prices have generally moved upward in recent years, the adoption of LIFO by corporations has permitted a permanent deferral of taxes compared with what would have been paid if other inventory methods had been used.

In the early discussions of LIFO, it was thought to be useful in obtaining results similar to hedging operations where actual hedging was not possible. Therefore, it was thought to be applicable only in those industries where the conditions were similar to those in the flour milling industry and other industries where hedging is possible. Thus the last-in, first-out method was considered to be appropriate when (1) the inventory consists of basic or homogeneous goods; (2) these goods form a substantial part of the cost of the final product sold; (3) the inventory is large in relationship to the total assets of the firm; (4) the inventory turnover is slow, generally because of the time required for processing; (5) changes in raw material prices tend to be reflected quickly in the prices of the finished product. Note, however, that LIFO only gives the illusion of a hedging transaction. The reported net income approximates that which would result if hedging had been used, but the gains and losses from the holding of inventories are not transferred to others; they are merely buried in the under or overstatement of the inventories.

With the change in the Internal Revenue Code in 1939 and the decision of the Tax Court in 1947, the door was opened for the use of LIFO by all taxpayers required to compute inventories. Therefore, the specific industry and firm characteristics were no longer considered necessary. The main consideration now is that LIFO should be used where it "more clearly reflects current income." Some argue that LIFO rightfully omits unrealized gains and losses arising from specific price changes, but others argue that LIFO is a good method of meeting the price level problem, particularly if it is used in conjunction with replacement cost depreciation.

The main arguments against LIFO can be summarized as follows :

1. One of the principal objections to LIFO is that the valuation of the inventory for balance sheet purposes is continually out of date, reflecting prices of some past period completely meaningless in the context of current conditions. And since the inventory valuation is dependent on the level of prices in the year the LIFO method was adopted, comparisons among firms, even in the same industry, are invalid even if all of the firms are using LIFO. The computation of the working capital ratio and other financial ratios is, therefore, useless, and the balance sheet is meaningless as a report of financial conditions. The parenthetical reporting of current inventory valuations would alleviate this difficulty in part, but this has seldom been done in published financial statements.
2. As a method of solving the price-level problem, LIFO is erroneous and incomplete. It adjusts income only to specific price changes of merchandise and only for price changes since the last purchase. Asset valuations in the balance sheet are not restated and cannot be interpreted in terms of current dollars.
3. A corollary to the above objection to LIFO is that it permits a deferral in the recognition of gains and losses from the holding of inventories while specific prices are changing at a rate different from that of

prices in general. It is generally claimed that these gains are not realized and therefore are not available for dividends, but they are an important part of the operations of any firm where actual hedging is not possible. On the other side of the coin, losses are also omitted from reported income, but this implies that the reported net income is available for dividends without consideration for the decrease in the invested capital resulting from the loss. These unrealized gains and losses may also arise from the efficient or inefficient buying practices of the firm. To the extent that this is true, they are very relevant in the measurement of the overall performance of management

4. LIFO is occasionally rejected on the ground that it is diametrically opposed to the usual physical flow of goods and, therefore, does not permit a good matching of specific costs and revenues. But even as a procedure for matching current costs and revenues, it is not perfect. The most recent purchase costs are matched against the revenues of the current period. However, unless both purchases and sales occur regularly in even quantities, the revenues will not be matched with the costs current at the time of sale. When purchases are irregular and unrelated to the timing of sales, the matching is haphazard, particularly if prices and costs are changing rapidly.
5. When it becomes necessary to reduce the inventory below the normal quantity, either voluntarily or involuntarily, the matching of ancient costs against current revenues produces absurd results. Income of a single year may include the accumulated gains and losses since the start of LIFO, resulting in a major distortion. Some accountants have suggested that this problem can be remedied by setting up a reserve for the excess of replacement cost over the recorded LIFO cost of the inventory liquidated. This method (sometimes referred to as NIFO—next-in, first-out) has been accepted for tax purposes in special cases of involuntary liquidation. But as a general practice, it may lead to absurdities. When the composition of the inventory is changing over time, or when the product itself changes, it may be impossible and at least unrealistic to obtain replacement or reproduction costs for items that are no longer produced. This procedure may also lead to the absurd position of a reserve that exceeds the inventory cost, thus resulting in a negative inventory in the balance sheet. Thus, the reserve is a meaningless figure that represents neither a contra to the inventory valuation nor a liability to replace the inventory. It is merely a device to keep from including in income the gains due to price increases since the LIFO prices were first recorded.
6. The fear of liquidation of the LIFO inventory and the tax consequences has led some firms to pursue irrational buying policies, particularly at the end of the tax year. Not only is this practice close to manipulation of the firm's income, but also it may result in unhealthy economic consequences. If many firms in the same industry attempt to replace their inventories at the end of the year, the pressure on the market may result in increased prices, at least temporarily, and a false indication of the real demand for the raw material or finished product.
7. Many of the proponents of LIFO claim that one of the benefits is a smoothing of net income. Smoothing occurs only if prices move down as well as up, but even if this is the case, smoothing is not a desirable attribute of financial accounting, particularly if it is artificial. The goal of smoothing confuses an operational goal of the firm with an accounting goal. If the results of operations are not smooth, accounting should not make them appear as if they were.
8. Even though LIFO does not generally reflect the flow of goods, it is argued that the objective is to present a flow of costs. However, costs do not flow, they move only to the extent that accountants move them. Therefore, LIFO is artificial and thus, invalid as a logical method of associating costs with goods sold and goods on hand.
9. Empirical studies suggest that FIFO is superior to LIFO as a method of reporting to common stock investment decision makers. However, another study has demonstrated that FIFO has a high propensity to overstate accounting income during periods of high inflation rates when compared with the use of current replacement costs.

LIFO or market. Lower of cost or market is incompatible with LIFO because of some basic incongruities that seemed to be partly responsible for the requirements of the Internal Revenue Code and Regulations that when LIFO is used for tax purposes, the inventory must be taken at cost regardless of market value. LIFO must be used for annual reporting purposes when it is used for tax purposes, hence, "LIFO or market" is unacceptable for reporting annual income when LIFO is used for tax purposes.

In spite of the opposition to LIFO or market, it has been proposed particularly for tax purposes for several reasons: (1) One of the early reasons for the proposal was to provide relief for those firms that were not permitted to use LIFO under the 1939 code because of an inability to identify specific units. On the basis of the decision of the

Hutzler Brothers Company case in 1947, the door was opened for the use of dollar-value LIFO, but these firms were not permitted to apply LIFO retroactively if they had not elected formally to change to LIFO in the previous period. If a firm or market, would have been a very haphazard way of providing for this relief, however. (2) A second argument for LIFO or market was to encourage firms to adopt LIFO immediately rather than wait until price levels should reach a lower point. Since many firms had failed to adopt LIFO when prices were still low, they became reluctant to adopt LIFO in the face of possible falling prices and the consequent tax disadvantage. Thus, it was thought that LIFO or market would create greater uniformity in the use of inventory procedures in many industries. (3) A third argument is that LIFO could result in inventory valuations that exceed replacement cost and that this is not in accordance with generally accepted accounting principles based on conservative valuations.

The arguments against LIFO or market can be summarized as follows: (1) The general objections to the lower-of-cost-or-market rule also apply to LIFO or market. (2) It permits an inconsistent valuation of inventories, based on LIFO in some periods and on FIFO in others. If prices are rising, the inventory will be valued on the basis of the older costs and the cost of goods sold will reflect the recent costs; but if prices are falling, the ending inventory would reflect current costs and the cost of goods sold would represent older costs. Thus, LIFO would be used when prices are rising, and FIFO would be approximated when prices are falling. But when prices again rise, there would be a shift back to LIFO with an even lower base valuation. This effect is sometimes known as HIFO (highest-in, first-out). The inventory will always be recorded at the lowest valuation experienced since the start of the LIFO method. (3) One of the main advantages of LIFO is the matching of current costs against current revenues. But, if LIFO or market were permitted, unrealized losses would be included in the computation of income when replacement costs fall below the LIFO base, although they are excluded at all other times.

Dollar value LIFO. The dollar value LIFO method was established as an expedient to avoid the necessity of maintaining records of the original LIFO prices and the prices of increments for each of the many items included in the inventories of a manufacturer. The ending inventory quantities are measured at base year prices; if this amount exceeds the dollar value of the beginning-of-the-year inventory in base year prices, the excess is the increment for the year. This increment is then restated in terms of current year prices by multiplying the increment in base year prices by the ratio of the ending inventory at end-of-year prices to the same quantities priced at base year prices. Occasionally, the ratio is determined by using a sample of the inventory rather than the entire goods on hand. Thus, the base year dollar is assumed to be a proper measure to determine the change in inventory quantities.

If the dollar value LIFO method is to approximate the individual LIFO computations, the items in the inventory should be grouped into homogeneous "cost pools." Their homogeneity should be in terms of their similarity of price movements, however, rather than in terms of their physical nature or use. However, the tendency in practice has been to use groups that are much too broad and that include items whose prices do not move in a similar fashion.

The result of the dollar value LIFO method is that the inventory can be stated at prices lower than would otherwise be stated if LIFO were applied to the individual items because, with the use of the "cost pools," increases in the quantities of some items may offset decreases in other items. In addition to all of the disadvantages of LIFO, dollar value LIFO suffers from the inaccuracies arising from the use of dollar amounts to represent quantities and the measurement of price changes on the basis of indexes or averages. Therefore, the dollar value method meets none of the objectives of inventory valuation and should be one of the first methods in the accountants' kit of tools to be abandoned.

Retail inventory methods

In small retail stores owned and operated by a single proprietor, it is often convenient to mark the cost in code on each box of merchandise as it is placed on the shelf. When an inventory is taken at the end of the year, the cost of each item can be recorded at the same time as the taking of the count. Thus, a specific identification method of costing is effected. In larger department stores, this procedure is too cumbersome and is not desirable from the point of view of inventory control. Perpetual records are also cumbersome because of the large number of items and styles that must be carried by such stores. High-speed computers permit specific identification and perpetual records, but until they are widely adopted, large retail stores have turned to the use of departmental averages to obtain estimates of inventory costs and to aid in setting up inventory control procedures.

In the retail inventory methods, the inventory quantity is determined by actual count and priced initially at current

retail prices. For interim statements, the inventory at retail prices can be estimated by subtracting the net sales for the period to date from the total goods available at retail prices. In this procedure, the inventory is a residual similar to that obtained by using the perpetual inventory method. The main difficulty is that losses are buried in the inventory amount, resulting in an overstatement of the inventory and of net income. But if a count is also taken the losses from theft or other causes can be estimated and recorded separately for accounting and control purposes.

After the inventory is computed or estimated at retail prices, it is converted to an input valuation by multiplying the inventory at retail by an average ratio of cost to retail prices for the current period. The computation of this average ratio is demonstrated as follows :

	<i>Cost</i> Rs.	<i>Retail</i> Rs.	<i>Ratio of cost to retail</i>
Inventory, January 1	12,000	16,000	
Purchases during the yera (net)	72,000	1,00,000	
Markups (less cancellations)		<u>4,000</u>	
Total	<u>84,000</u>	1,20,000	(A) 70%
Deduct markdowns (less cancellations)		<u>8,000</u>	
Goods available for sale	<u>84,000</u>	1,12,000	(B) 75%
Deduct sales (less returns and allowances)		<u>90,000</u>	
Inventory (residual) at Dec., 31, at retail		<u>22,000</u>	
Physical inventory at Dec., 31, at retail		<u>20,000</u>	

The inventory at retail is reduced to an input valuation by multiplying this amount by the ratio of cost to retail for the goods available for sale in the current period. A more current ratio may be obtained by using only the purchases for the current year, but a practical difficulty arises in allocating the markups and markdowns to the beginning inventory and to the purchases. In either case, there is an assumption that the resulting average ratio is representative of the ratio of cost to retail prices in the ending inventory. To increase the probability of this, a separate ratio should be computed for each department or type of goods that carries a relatively uniform mark-on. If mark-on percentages are not uniform, the proportion of each type of merchandise in the ending inventory should be similar to the proportion of each type in the total goods available for sale during the year.

In the above example, the use of ratio B is assumed to result in an estimate of cost. Markups and markdowns are determinants of selling prices and independent of the original costs. Thus, the ending inventory at cost would be 15,000 (20,000 × 75 percent). But this assumes that the markups and markdowns are proportionately distributed between goods sold and goods not sold. If we assume two extreme possibilities, we see that the ending inventory may be grossly understated or grossly overstated. Assume first that the markups are all made at the end of the year and are reflected in the inventory at retail; the markdowns are assumed to relate uniformly to the goods sold and the goods not sold. If the inventory had not been written up at the end of the year, it would have amounted to Rs.16,000 at retail and Rs.12,480 (Rs. 16,000 × 84,000/108,000)at cost. On the other hand, if we assume that the markdowns were all made at the end of the year and relate to the ending inventory and that the markups relate uniformly to all goods, the inventory expressed at 15,000 (at cost) would be understated. If these markdowns at the end of the year had not been made, the ending inventory at retail would have been 28,000 (20,000 + 8,000) and the inventory at cost would have been 19,600 (28,000 × 70 percent). Thus, the inventory at assumed cost could range from 12,480 to 19,600, depending on the assumptions made. If the markups and markdowns are included only in the ending inventory and reflect current selling prices, the best that can be said for the method is that it states the valuation of the inventory at net realizable value less a “normal” net markup.

It has occasionally been assumed that the retail cost method results in an approximation of the weighted average method because the cost-retail percentage is computed as a weighted average of the cost-retail relationship of all goods available for sale during the period. However, the averaging results primarily from the use of the same cost-retail percentage for all goods in the departmental inventory regardless of individual mark-on percentages. Only if selling prices are relatively stable, or at least unrelated to the changes in cost prices during the period, will the ending inventory valuation approximate a weighted average cost. If selling prices are moving in the same direction as costs and

in approximately the same percentages, a first-in, first-out inventory method may be approximated. For example, if both costs and selling prices have increased by 20 percent during the period, the mark-on percentage will have remained constant; and since the ending inventory will be priced initially at the selling prices existing at the end of the period, the conversion to cost will result in an approximation of the most recent purchase costs, reflecting a first-in, first-out flow.

Retail lower of cost or market. The customary practice in the department store and apparel businesses is to use percentage A in the above example, computed from the cost-retail relationship after adding markups, but before subtracting markdowns. This practice has become common because it is assumed to reflect the lower of cost or market. There is little question that percentage A represents the lowest cost-retail ratio that can be computed from the current cost-retail relationships and, therefore, the most conservative. But there is considerable doubt that it does reflect *market* defined as replacement cost.

As indicated above, ratio B is an estimate of cost only if the markups and markdowns apply proportionately to the ending inventory and to the goods sold; that is, it must be assumed that the goods sold and the goods unsold are marked up or down by the same percentage. If this assumption is valid, we could estimate current replacement cost by using the cost-retail percentage computed before markups and markdowns. But one further assumption must be made—the markups and markdowns must have been made as a direct result of changes in replacement costs. The most likely situation, however, is that markups do reflect increases in costs, but that markdowns do not reflect decreases in cost. Additional markups, unless they are merely corrections of errors, reflect decreases in cost. Additional markups, unless they are merely corrections of errors, reflect enhanced salability connected primarily with a rising wholesale market. On the other hand, markdowns are made for a large number of reasons other than changes in costs.⁷

We see, therefore, that using a ratio computed *before* markups would result in an approximation of replacement cost (although above cost) if the markups are reflected proportionately in the ending inventory. But because markdowns do not reflect decreases in costs, the cost-retail ratio computed before markdowns cannot be used to approximate replacement costs. Therefore, we must search further for some justification for using the cost-retail percentage computed after markups but *before* markdowns. This justification is in the assumption that markdowns reflect declines in the utility of the merchandise to the firm. That is, a markdown is assumed to result in a current loss because it represents a decline in the expected revenue to be obtained from the sale of the merchandise on hand. The merit of this argument rests in the fact that merchandise that must be marked down is not worth as much to the firm as merchandise that need not be marked down. Thus, if the latter is worth no more than cost, the former must be worth less. Note, however, that this argument is based on the assumption that revenue is realized only at the time of sale and that any impairment of this potential realization results in a current loss. The concept of market is, therefore, that of net realizable value less a normal net markup.

But the word *normal* has a different meaning in this context than it does when the so-called cost retail method is used. Ratio A is here considered to be normal, implying that markups are normal or rare but that markdowns are not. In the cost approach, the average net mark-on for the period is considered to be normal. Two other concepts of normality could also be considered: (1) the ratio of cost to retail *before* markups and markdowns and (2) the ratio of cost to retail *before* markups but *after* markdowns. The former should probably be considered the minimum ratio (the maximum anticipated mark-on). The complement of this ratio represents the anticipated gross profit margin at the time the merchandise was originally priced. It does not seem reasonable that a loss should be recorded in the current period so that a larger gross margin could be realized in the following period. The second ratio (2 above) of cost to retail, *before* markups but *after* markdowns is not now generally accepted because it might possibly permit the recording of unrealized gains if markups are made in response to increases in replacement costs, but it would not reflect losses arising from decreases in replacement costs. However, markups are not generally considered normal at least not unless inflation rates are predictable. But markdowns are a normal part of the pricing process of retail stores. Therefore, markdowns can be anticipated and markups cannot. Normality should refer to that which is recurring in the absence of extraneous events. If some of the markdowns are caused by unusual and nonrecurring events, they should be omitted in the computation of the cost-retail ratio. Since the cost-retail ratio is multiplied by the inventory expressed in terms of the retail prices at the end of the year, the input valuation of the inventory would be the net realizable value less a normal net markup.

LIFO applied to the retail method. When LIFO was generally accepted for income tax purposes in 1939, it was still thought to be inapplicable to department stores, primarily because of the lack of homogeneity of the merchandise and the inability to identify specific quantities of inventory at the beginning of the year with specific quantities of similar merchandise at the end of the year. Department stores, therefore, turned to the use of index numbers to identify changes in inventory volume, and procedures for the application of LIFO to the retail method became

acceptable for tax purposes in 1947. The reasons for the adoption of LIFO by retail firms are similar to the basic arguments discussed earlier in this chapter. The following is a brief evaluation of some of the basic characteristics of the LIFO retail method.

The first characteristic is that the LIFO base is measured in terms of a specific dollar value of inventory at the time the LIFO method was started plus the dollar value increments since that date. Since the types of merchandise handled change over time, specific quantities of merchandise cannot be used as the base stock. Instead, the dollar retail value of the ending inventory is converted into the dollars of the base year by the use of price indexes. Therefore, it permits the maintenance of investment in specific categories of merchandise. Gains and losses from the holding of inventories are excluded from income only if the indexes are representative of the specific types of merchandise in the inventories.

A second characteristic is that the "lower of cost or market" is not considered applicable because it is assumed to result in "LIFO or market." But because the use of the cost-retail percentage after markups and before markdowns does not necessarily approximate replacement cost, this argument is not sound. However, since the use of the ratio computed after both markups and markdowns reflects a better concept of normality and is possibly a closer approximation of cost, there is some merit in its use.

A third characteristic is that the increments to the inventory are computed on the basis of prices at the end of the year, so that they reflect the FIFO method for the current year rather than a strict adherence to LIFO throughout.

The gross profit method

The gross profit method differs from the retail method in two main computations: (1) The cost-sales ratio is computed by taking an average of the ratios of cost of sales to sales for several prior years, whereas in the retail method, the cost-retail percentage relates to the ratio of goods available for sale in the current year at cost to the same goods priced at retail. In the gross profit method, the ratio is less current, but it is computed from costs that are more comprehensive and include such items as normal losses. (2) The inventory is computed by subtracting the estimated cost of sales from the cost of goods available for sale. In the retail method, the goods available for sale are priced at retail, and by subtracting the sales for the period, an estimate of the ending inventory at retail is obtained. These two methods are similar, but the gross profit method is less accurate because the cost of goods sold is a rough estimate resulting in an approximation of both the volume and cost of the goods on hand.

The main uses of the gross profit method are as a means of estimating an inventory when a count of the inventory is not possible or practicable and as a test of the ending inventory computed by other means. Because of the inaccuracies in the method, it should not be relied on in the computation of the ending inventory except as a last resort. For example, when the inventory has been destroyed by fire or when a part has been stolen, and the retail method cannot be used, the gross profit method may provide a reasonable approximation. As an auditing test, the gross profit method cannot prove the accuracy of the physical inventory or inaccuracies in the inventory computation, but it can indicate whether or not the computed inventory is reasonable. If the difference between the actual inventory and that computed by the gross profit method cannot be accounted for by the inaccuracies of the gross profit estimate, further investigation is required.

The gross profit method is not generally considered to be acceptable for financial reporting purposes for two principal reasons: (1) A physical inventory is not taken, so the inventory valuation is a residual with all of the limitations of the perpetual inventory method. (2) The gross profit percentage is computed as an average of prior years. The relationship between costs and selling prices is not generally uniform over time, so that an average of the gross profit percentage of prior years is not a reliable estimate of the relationship in the current period.

Comparison of the various cost methods during periods of price changes

When specific prices are changing in the same direction during the accounting period, the several methods of inventory valuation based on cost provide different effects on the net income for the period and on the balance sheet valuation at the end of the period. In all of the cost methods, however, the dollar value of the goods available for sale is equal to the sum of the ending inventory and the cost of goods sold. The effect of price changes is reflected in either the inventory or the cost of sales. It can be isolated and reported separately only if a current cost valuation or some other valuation basis is substituted for cost. Note that none of the cost methods can provide a substitute for the adjustment for price-level changes as discussed in the concerned chapter.

The specific effect of price changes on current income and on balance sheet valuation depends on several factors, including the degree of price fluctuations, inventory turnover, the level of prices existing at the time the current

procedure was adopted, and the relationship of inventory costs to other costs. The following generalizations, however, can be made: (1) FIFO will generally result in the highest inventory valuation and the highest net income if the specific prices are rising steadily throughout the period. The reverse is true when prices are falling steadily. (2) LIFO results in the lowest income for the current period when prices are rising steadily and when there is no liquidation of the beginning inventory. The valuation of the ending inventory may be above or below that under FIFO, depending on the level of prices when LIFO was started. (3) The weighted average method is neutral with respect to inventory and cost of sales. Generally, cost of sales and net income will fall between the extremes of FIFO and LIFO. When a moving weighted average is used, the result is closer to that obtained by the use of FIFO because the recent purchases receive greater weight. (4) The retail method approximates net realizable value less a "normal" net mark-on for the ending inventory. Because the ending inventory is priced initially at the selling prices existing at the end of the period, the result is closer to FIFO than to average costs.

When prices move upward and downward with equal amplitude over the business cycle, LIFO tends to result in a smoothing of income as compared with other methods. That is, LIFO results in the lowest income when prices are rising and in the highest income when prices are falling, while FIFO results in the opposite. The more rapid the turnover rate, the smaller will be the difference between the several methods. Also, the smaller the change in prices, the smaller will be the difference between the methods. In fact, if prices are perfectly stable and all lots of merchandise are purchased at the same prices, all of the various cost methods will result in the same net income and asset valuation.

A summary comparison of cost association methods

<i>Method</i>	<i>Objective</i>	<i>Effect on income and balance sheet</i>	<i>Special conditions</i>
Specific identification	Specific matching	Depends on actual flow of merchandise.	For valuable or unique items of items easily identifiable.
Weighted average	Permits a single representative price.	Neutral.	Periodic inventory only.
Moving weighted average	Single price with greater weight to recent purchases.	Similar to FIFO, particularly if turnover is high	Perpetual inventory only.
First-in, First-out	Approximation of specific matching.	Balance sheet expressed in recent costs. Reflects highest income when prices are rising.	Goods assumed to be sold on FIFO basis.
Last-in, first-out	Matching of current costs with current revenues.	Balance sheet valuation based on old costs. Cost of sales in terms of recent purchases. Results in lowest income when prices are rising.	Valid only if base inventory is no liquidated. Useful when holding gains and losses are not relevant.
Retail method	Approximation of specific costs or lower of cost or market.	Similar to FIFO under certain conditions.	For a large variety of items with similar mark-on percentage. May be used for perpetual or periodic inventories.
Gross profit method	Estimation of inventory when count is not taken or as a lost of other methods.	Similar to FIFO under certain conditions.	Perpetual inventory procedure only. Assumes stability of gross profit percentage over time.

Summary of cost association methods

The several methods of associating costs with inventories and goods sold are compared briefly with respect to their objectives, their effect on income and the balance sheet, and the special conditions relating to each method in the table entitled "A summary comparison of cost association methods."

BEHAVIORAL EFFECTS OF INVENTORY METHODS

One justification for different valuation methods for inventories is that each method should reflect different economic circumstances. However, in a questionnaire study, Chasteen found this not to be the case. His study suggested that firms in the United States make a choice on the basis of the effects on reported income and the tax effects to a much greater extent than they do on the basis of economic circumstances. But the direct effect on reported income is cosmetic only and does not reflect any real change in the resources of the firm. The income tax effect, on the other hand, does reflect a real change in future cash payments for taxes. Therefore, there does not appear to be any justification for the many alternative pricing methods except possibly to reveal the tax effect.

A second possible justification might be the effect of different pricing methods on stock prices in an efficient securities market. The traditional view is that methods resulting in lower reported earnings would result in lower stock prices and vice versa. However, studies have shown that the market is not fooled by changes in accounting methods that manipulate reported income but do not reflect real economic changes in the firm. This is consistent with the efficient market hypothesis, which states that (in the semistrong form) all publicly available information is immediately impounded in the market price of stock and, conversely, irrelevant information or data are ignored.

A more recent study suggests that a change to LIFO results, at least in the short run, in a downward movement in stock prices. In another study, individuals were influenced negatively by lower reported earnings resulting from a switch to LIFO, even though they were shown the positive impact of the switch on net cash inflows. These studies suggest the presence of market inefficiencies at least in the short run and the existence of functional fixation on reported earnings. It is not logical to draw conclusion regarding accounting policy from the limited studies to date. However, there is at least a suggestion that the existence of a number of alternative pricing methods for inventories may cause more harm than benefit and that the methods of reporting information regarding inventories should be improved.

Accounting Statement-2 (Revised)

This accounting standard is mandatory. It was made effective from 01.04.1991. The students are required to have the knowledge of this accounting standard. The AS-2(R) is being explained stepwise have as under:

Scope

Items such as expenses, revenues or book debts, can be recorded in the books of accounts with a fair degree of accuracy. However, an element of subjectivity is involved in the measurement of items such as depreciation or inventory value. Methods of valuing inventory may vary between different businesses and even between different undertakings within the same trade or industry. Taking all these significant aspects into account, this Standard deals with

- (a) the determination of value at which inventories are carried until related revenues are recognised
- (b) ascertainment of cost thereof, and the
- (c) circumstances in which carrying amount of inventory is written down below cost.

Inventories - defined

Inventories are assets

- (a) held for sale in the ordinary course of business,
- (b) in the process of production for such sale ; or
- (c) in the form of materials or supplies to be consumed in production process or in the rendering of services.

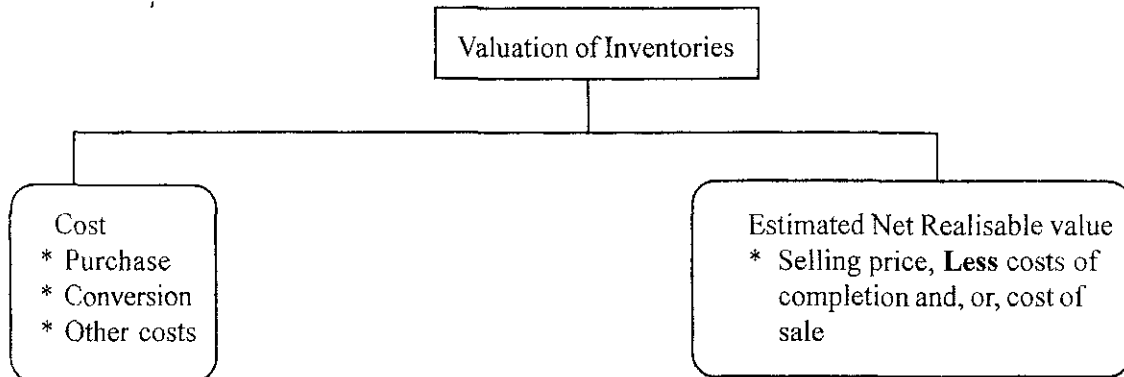
The definition implies that "*intangible*" items of inventory, such as software held for sale, are also included.

What is covered as inventory?	What is not covered by AS2 ?
Goods purchased and held for resale ample : Merchandise of a retailer, computer software, land, or other properties, held for resale	Shares, debentures and other financial instruments held Ex- as stock in trade
Finished goods produced - for sale	Livestock, agricultural and forest products, mineral oils, ores and gases etc. for valuation of which certain established practices may exist
Work In progress - generally	WIP under construction contracts, or of service providers

Materials, maintenance supplies, consumables loose tools awaiting use in production process. (governed by AS-10). Machinery spares that are used only in connection with an item of fixed asset, and there is no regularity of use

Measurement (Valuation of Inventories)

The critical operative part of the Standard is that "Inventories should be valued at the lower of (a) cost and (b) net realisable value"



An analytical summary of the code laid down in the Standard in respect of these two elements and other related issues is presented as two independent segments, in the following paragraphs.

Segment I: Cost :

The following elements that constitute cost of inventories should be kept in mind:

Cost includes :

- * Cost of purchase, net of trade discounts, rebates, duty draw-back, Cenvat credit availed, etc.
- * Cost of conversion
- * Other costs incurred in bringing the inventories to their present location and condition

But, cost does not include :

- * Selling and distribution costs
- * Abnormal wastage, storage costs

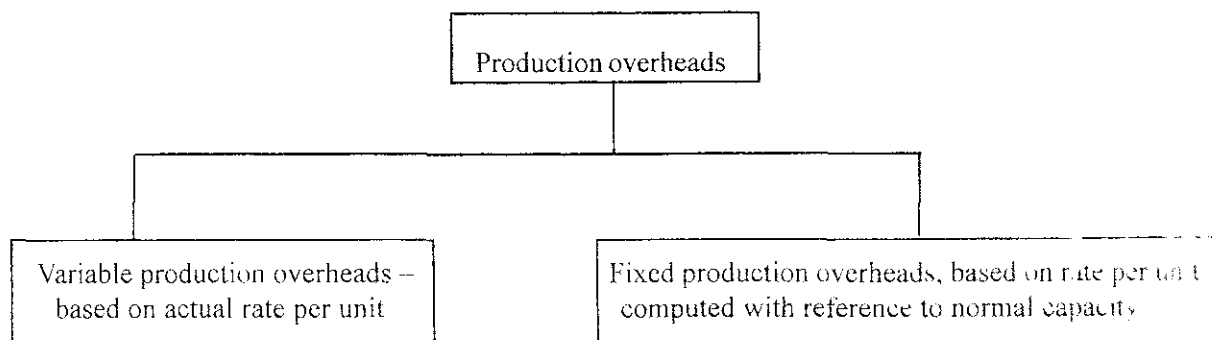
(a) Cost of purchase - inclusions and exclusions

- * Purchase price
- * Duties and taxes on such purchases except those that are subsequently recoverable by the enterprise from the taxing authorities.
- * Freight inwards
- * Other items of expenditures directly attributable to the acquisition e.g., certain expenses may be incurred to depute a special team to negotiate the price and inspect quality etc., Such expenses, which are inextricably linked to purchase, ought to be included.
- * **But**, trade discounts, rebates, duty drawbacks and similar items are deducted in determining the cost of purchase

(b) Cost of conversion

Direct Labour :

Direct labour costs are those that are specifically attributable to units of production completed or in the course of production



Variable production overhead expenses (VPOH) represent such indirect expenses attributable to production

vary directly, or nearly directly, with the volume of production. Variable production overheads are assigned to each unit on the basis of actual use of the production facilities, as shown in the following example

	(Amount / Rs where applicable)	
	Year 1	Year 2
VPOH	750,000	852,000
Actual production	250,000	300,000
Allocation Per unit	3.00	2.84

- Fixed production overhead expenses (FPOH) represent indirect cost of production and are such as would remain relatively constant regardless of the volume of production (E.g., depreciation and maintenance of factory building, factory management expenses). An essential attribute of FPOH is that - but for these expenses the inputs cannot be converted into saleable outputs.
- Allocation of FPOH, as a part of cost of inventory, should be based on the 'normal capacity of the production facilities'. Normal capacity is the production expected to be achieved on an average **over a number of periods or seasons** under normal circumstances, taking into account the loss of capacity resulting from planned maintenance. The amount of fixed production overheads allocated to each unit of production is not increased as a consequence of low production or idle plant. (The option available to enterprises under the earlier AS 2, to adopt marginal cost formula, and to write off entire FPOH as period costs, stands withdrawn).
- When actual production is less than normal level, an element of FPOH will remain unallocated. Such unallocated FPOH should be recognised as an expense in the period in which they are incurred. In periods of abnormally high production the amount of FPOH allocated to each unit of production is revised so that inventories are not measured above cost, as shown in the following example.

	(Amount / Rs where applicable)	
	Year 1	Year 2
Normal capacity	250,000	250,000
FPOH	750,000	750,000
Actual production	242,000	300,000
Allocation per unit	3.00	2.50
Amount to be charged as period costs	24,000	NIL

Joint costs - guideline for allocation

At the end of a common process, joint products or one main product and by-products may result, though costs of conversion for each category of output may not be separately identifiable. In such situations, conversion costs jointly incurred for all categories of output, are allocated amongst the products on a rational and consistent basis. The allocation may be based, for example on the relative sales value of each product either at the stage in the production process when the products become separately identifiable or at the stage when production is completed.

In a majority of cases, value of by-products as well as scrap or waste materials, would be small. These are often measured at net realisable value and this value is deducted from the cost of the main product. As a result, the carrying cost of the main product is not materially different from its cost.

(c) Other costs

Certain costs are necessarily incurred to bring the inventory to its present location and condition. Such a cost, though not related to purchase, labour or overheads, can be taken as forming part of cost. For example, cost of "designing a product" to meet the specific requirement of a customer can be included.

Exclusion of certain components from cost

In determining "cost" certain components are required to be excluded and treated as expenses of the period in which they are incurred. Examples of such costs are :

- Cost attributable to abnormal wastage of materials, labour, or other production costs with comparable characteristics
- Storage (self) costs unless those costs are indispensable in production prior to a further processing stage
- Administrative overheads that do not contribute to bringing the inventories to their present location and condition; and Selling and distribution costs.

Interest element vs. cost of inventory

The Standard provides that interest and other borrowing costs, are usually considered as NOT RELATING to bringing the inventory to its present location and condition. Therefore, such costs are **usually not included**. (Also refer to AS 16 Borrowing Costs, Under AS 16. read with 'this Standard, interest can be added to the cost of

inventories only where time is the major factor in bringing about a change in the condition of inventories).

Cenvat Credit & Excise duty Vs. cost of inventory

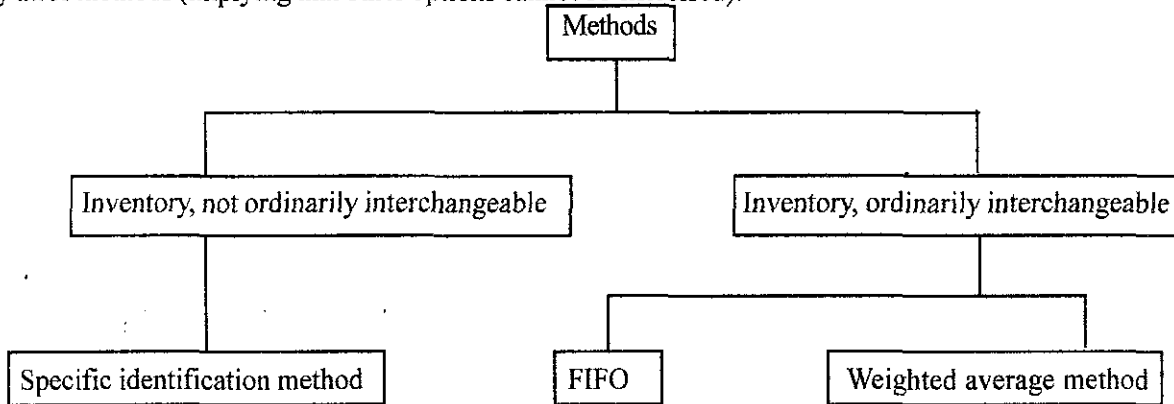
Excise duty paid or payable is an element of cost, and should be included in valuation. However, any amount recoverable from tax authorities by way of Cenvat credit will have to be excluded in the valuation of finished goods items. Consider the following example.

ABC Ltd purchase raw materials at a basic price of Rs. 10,000 on which excise duty of Rs. 1,500 is paid. Cost of inventory (of raw materials) at this stage would be Rs. 11,500. The material is thereafter processed. For this purpose conversion costs (labour and direct overheads, and other fixed production overheads) amounting to Rs. 1,800 are incurred. Cost of inventory of finished goods at this stage is Rs. 13,300.

Excise duty liability on finished goods emerges as and when manufacture is complete, and this amounts to Rs. 1,700/-. Cost of inventory at this juncture may be taken as Rs. 15,000/-. However, since ABC Ltd are entitled to a Cenvat credit of Rs. 1,500/-, Excise duty payable on Finished Goods is notionally adjusted against ED paid on materials consumed. Thus, Cenvat-related ED cannot be included as a part of the cost of inventory. The cost of inventory would thus be valued at Rs. 13,500/- only.

Cost formulae

In as much as costs do not remain static and vary from time to time, several types of cost formulae can be used. In inventory valuation, therefore, the question that is crucial is, with reference to the flow of production, which (items of) inventory has been sold and which (items) continue to remain in inventory. In this backdrop, inventory valuation depends on cost flow assumptions such as FIFO, LIFO, HIFO, Base Stock method, etc. But, the standard favours only three methods (implying that other options cannot be exercised).



(A) SPECIFIC IDENTIFICATION METHOD

The method is also known as Specific Price method, Identifiable cost method, etc. This is also known as actual cost method because the specific job bears the actual cost of materials bought for the job. When using this method, units in inventory are specifically identified and each unit cost is identified with a particular invoice. In other words, this method tracks the actual physical flow of goods available whether for sale or for production. The advantage of this method is that cost charged to jobs is factual and not notional.

Cost of items forming part of inventory, **that are not ordinarily interchangeable** as also for goods or services produced and segregated for **specific projects**, should be assigned by specific identification of their individual costs. This cost formula is particularly suited for automobiles, expensive Jewellery, antique shops or custom-made merchandise. This formula has to be applied whenever materials are purchased and set aside for a specific job or work order.

This could be a cumbersome or impracticable exercise, when the items are **many and interchangeable**. The standard, therefore, permits the use of two other formulae which are practicable and which nearly serve the same purpose. The cost of inventories, other than those falling under specific identification method should be assigned by using the first in first out (FIFO), or weighted average cost formula. While the enterprise is vested with a choice in selecting the formula, the formula selected should be in line with the principle that it shall reflect the fairest possible approximation to the cost incurred in bringing the items of inventory to their present location and condition.

(B) FIRST IN FIRST OUT METHOD

The method is based on the assumption that the materials, which are purchased first, are issued first, issues of materials are priced in the sequence of incoming order of purchases. The flow of cost of materials should also be in

the same order. Issues are priced on the same basis until the first lot received is exhausted, after which the price of the next lot received becomes the basis of cost for issues. Upon this lot being fully used, the price of the subsequent lot is taken as the base, and so on. Thus, the materials issued are priced at the cost pertaining to the earliest lot, and as a corollary the inventory in hand is valued at a price representing recent purchases.

The use of FIFO does not necessarily mean that materials, which were held longest in stock, are physically exhausted first. It merely denotes that cost incurred for the "earliest purchase" is first used for accounting purposes. It is a common practice for most business houses to sell or issue oldest merchandise or materials first so that when FIFO is used for inventory valuation, there is agreement between cost flow assumption and the physical flow of goods. The ending inventory thus would consist of goods recently produced or purchased.

The FIFO method is most successfully used when :

- size of raw materials is very large and cost is high
- materials are easily identified as belonging to a particular purchase lot
- not more than two or three different receipts are on material card at one time.
- Price of materials does not fluctuate widely, so that clerical labour involved is minimised.
- materials are subject to deterioration and obsolescence.

(C) WEIGHTED AVERAGE COST (WAC) METHOD

WAC is calculated by dividing the total **cost** of material in stock by the total **quantity** of material in stock. Under this method, costs are averaged after weighting (i.e., multiplying) by their quantities. The weighted average cost is determined, either at periodical intervals, or each time when fresh materials arrive on purchase. The average cost at any time is, thus, the balance value figure divided by the balance units figure. This method evens out the effect of widely varying prices of different lots of purchases, which make up the stock. There will be no profit or loss arising out of pricing issues.

Other Techniques of Measurement

AS 2 allows adoption of either Standard Cost method or Retail price method if it were to result in estimation of cost of inventory that approximates actual cost.

(a) Standard Cost

Standard Cost is defined by the Chartered Institute of Management Accountants (CIMA), London as follows: "The predetermined cost calculated in relation to a prescribed set of working conditions, correlating technical specifications and scientific measurements of material and labour to the prices and wage rate expected to apply during the period to which the standard costs intended to relate, with an addition of an appropriate share of budgeted overhead". It is the predetermined cost based on attainable efficiency standards for a given volume of output.

(b) Retail inventory Method.

This method is based NOT ON actual **cost** but aims at ensuring that the value of inventories being a close approximation to cost. This method is associated with periodic, inventory systems where detailed records are not kept. Retail Stores, that have numerous items with low unit costs usually, adopt this system. Hence the nomenclature Retail Inventory Method.

The retail stores, because of the many items sold, cannot keep track of physical flows. It is also difficult to assume cost flows like FIFO etc. Therefore, it adopts a fairly simple method to obtain value of end inventory. However, in order that this method is effectively applied, specific information must be available both on retail prices and likely margins. This method involves three steps :

- Obtaining value of end inventory at retail prices (i.e., prices at which they are most likely to be sold)
- Establishing a relationship between cost and retail prices. In most retail businesses there is a discernible relationship between cost and retail prices that reflects "gross margin". This must be based on current year's data.
- Applying the gross margin percentage so ascertained to retail price of such inventory; in order to measure its cost.

Segment II : Net realisable Value

It would be recalled that inventories should be valued at the lower of cost and net realisable value.

Net Realisable Value (NRV) is defined as the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Salient aspects to be taken into reckoning are :

- For estimating the NRV, information about net estimated selling price available as on balance sheet, is taken into account.
- The inventories should be written down to NRV when such value is lower than cost (Cost, determined in conformity with this Standard).
- If, however, NRV exceeds cost, the excess is to be ignored and valuation of inventories should be based at cost only.
- Inventories are valued at cost and not at sale price by reason of the principles governing revenue recognition. There can be no recognition of revenue except at the point of sale and hence inventories will have to be valued at cost only.

Circumstances that would prompt valuation at NRV, include :

- where the cost of inventories may not be recoverable – in situations where items under valuation are damaged, or become wholly or partially obsolete,
- where there is a fall in market prices,
- where estimated costs of completion or estimated costs necessary to make the sale, have increased

The validity of this approach stems from the canon that carrying amount of assets should not be in excess of amounts expected to be realized from their sale or use, as also the principles of “prudence” and “revenue recognition”

Stated differently, a departure from cost basis of valuing the inventory is required when the utility of goods is no longer as great as its cost. Also, where there is evidence that the utility of goods (realisation by disposal) will be less than cost, the difference is recognized as a loss for the current period. Considerations governing estimation of NRV are :

- Most reliable evidence available at the time the estimates are made as to amounts that the inventories are expected to realise.
- Fluctuations of price or cost directly relating to events occurring after the balance sheet.
- Date to the extent that such events confirm the conditions existing at the balance sheet date. (This is in accordance with AS - 4 on Contingencies and Events occurring after Balance Sheet date which states among other things that assets and liabilities should be adjusted for events occurring after balance sheet date that provide additional evidence to assist the estimation of amounts relating to conditions existing at the balance sheet date)
- The purpose for which the inventory is held. If inventory is held to satisfy “**firm**” sales or service contracts, the net realizable should be based on the **contract price**. If inventory held is beyond the requirements of contracts already entered into, the net realizable value of the excess inventory must be based on general selling prices.
- **Contingent losses** on firm sales contracts (in excess of inventory quantities held) and firm purchase contracts, are dealt with in accordance with the principles enunciated in AS - 4. The Standard says that a contingent loss should be provided for by a charge in the profit and loss if
 - ⇒ it is probable that the future events will confirm that, after taking into account any related probable recovery, an asset has been impaired or a liability has been incurred as at the balance sheet date, and
 - ⇒ a reasonable estimate of the amount of the remaining loss can be made.
- Materials (or other supplies) held for use in the production of inventories are **not written down** below cost if finished products in which they will be incorporated are expected to be sold at or above cost.
- However should there be a decline in the price of materials and it is estimated that the cost of the finished products will exceed net realizable value, the materials are written down to net realizable value. In such circumstances, the **replacement cost** of the materials may be the best available measure of their net realizable value.

- At each balance sheet date, a review is undertaken to consider applicability of net realizable values of inventories in order to apply the rule of lower of cost and net realizable value in the matter of valuing inventories.

An example

Particulars	Amount Rupees	
	Possibility I	Possibility II
Expected sale price	1,800	1,950
(a) finishing cost to be incurred	160	190
(b) distribution cost to be incurred	240	310
Estimated net realisable value	1,400	1,450
Cost so far incurred	1,250	1,625
Carrying amount to be reckoned for BS	1,250	1,450

Application of Rule of cost or net realizable value

This rule can be applied in any of the following ways

- **Item by item method** : Under this method cost and net realizable value of each and every item is considered individually, and the lower figure is taken for the purpose of inventory valuation.
- **Group method** : (Also known as global method) Under this method similar or related items are grouped into categories and the lower of cost and net realizable value is applied to **each category** instead of every item forming part of a category. Such a method is adopted ONLY in cases of items of inventory relating to the same product line that have similar end-uses and are produced and marketed in the same geographical area and cannot be otherwise evaluated separately from other items in that product line.

Interpretation

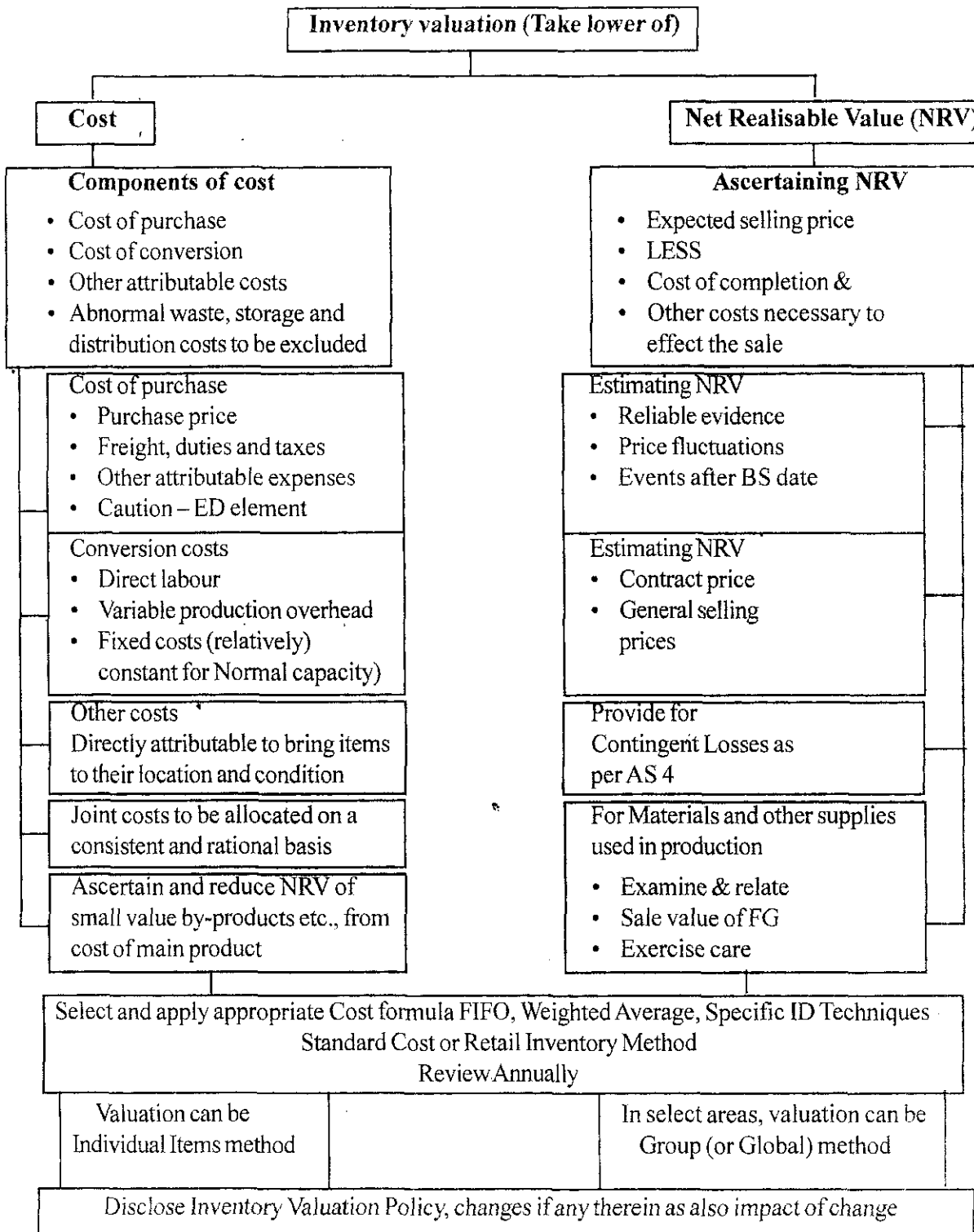
Interpretation Committee of Accounting Standards Board (ICASB) has enquired into the issue of which types of machinery spares are covered under AS 2 (Valuation of Inventories) and what should be the accounting treatment for machinery spares under this Standard.

It has been clarified by the committee (Vide Interpretation Number 2) that Machinery Spares, which are not specific to a particular item of fixed asset, but can be used generally for various items of fixed assets should be treated as inventories for the purpose of AS 2. Such machinery spares should be charged to the statement of Profit and Loss, as and when issued for consumption in the ordinary course of operations.

Disclosure

- The accounting policies adopted in measuring inventories, including the cost formulae used; and
- The total carrying amount of inventories and its classification appropriate to the enterprise, showing separately, the carrying amounts applicable for each category, e.g. stores and spares, loose tools, raw materials and components, work in progress and stock in trade (finished goods).
- In accordance with AS-1 disclosures must include changes if any, in the accounting policy with respect to valuation of inventory and its effect on the financial statements of the current period.

A diagrammatic representation of AS 2



CHAPTER-11

FINANCIAL REPORTING

Financial reporting may be defined as communication of published financial statements and related information from a business enterprise to third parties (external users) including shareholders, creditors, customers, governmental authorities and the public. It is the reporting of accounting information of an entity (individual, firm, company, government enterprise) to a user or group users. Company financial reporting is a total communication system involving the company as issuer (preparer); the investors and creditors as primary users, other external users; the accounting profession as measures and auditors and the company law regulatory or administrative authorities.

OBJECTIVES OF FINANCIAL REPORTING

Financial reporting is not an end in itself but is a means to certain objectives. The objectives of financial reporting and financial statements have been discussed for a long time. While there is no final statement on objectives, to which all parties (of financial reporting) have agreed, some consensus has been developing on the objectives of financial reporting. The following may be described as the primary objectives of financial reporting:

- (a) Investment Decision-Making
- (b) Management Accountability

Investment Decision-Making

The basic objective of financial reporting is to provide information useful to investors, creditors and other users in making sound investment decisions. The Trueblood Committee stated that... "the basic objective of financial statements is to provide information useful for making economic decisions." Recently, the FASB (USA) in its Concept No. 1 also concluded that "financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit and similar decisions.

It is essential to have an understanding of the investment decision process applied by external users in order to provide useful information to them. The investors seek such investment which will provide the greatest total return with an acceptable range of risk. Investment return is comprised of future interest or dividends and capital appreciation (or loss). The investors while making investment decision aim to determine the amount and certainty of a company's future earning power in order to estimate their future cash return in dividends and capital appreciation. Earning power is the ability of a business firm to produce continuous earnings from the operating assets of the business over a period of years, which may differ from accounting net income. The financial statements and other business data are analysed in relation to the enterprise's environment to project this future earning power. Investors compare returns on alternative investments relative to risk, which (risk) is the degree of uncertainty of future returns. In this way, investment funds tend to flow toward the most favourably situated companies and industries and away from the weaker and less promising companies.

Management Accountability

A second basic objective of financial reporting is to provide information on management accountability to judge management's effectiveness in utilizing the resources and running the enterprise. Management of an enterprise is periodically accountable to the owners not only for the custody and safe-keeping of enterprise resources, but also for their efficient and profitable use and for protecting them to the extent possible from unfavourable economic impacts of factors in the economy such as technological changes, inflation or deflation. Management accountability covers modern performance issues based on efficiency and effectiveness notions. The management accountability concept includes information about future activities, budgets, forecast financial statements, capital expenditures proposal etc. Accountability is beyond the narrow limits of companies' legal responsibilities to shareholders (and sometimes debenture holders and creditors). It obviously includes the interest of persons other than existing shareholders.

Management accountability is of very great interest not only to existing shareholders and other users but also to potential shareholders, creditors and users. A company generally offers shares, debentures etc. to the respective investing public and therefore it should accept accountability responsibilities to prospective investors also. Certainly annual and other financial statements are intended to play a major role in this regard.

DEVELOPMENT OF FINANCIAL REPORTING OBJECTIVES

The subject of financial reporting objectives has been generally recognised as very important in accounting area since a long time. Many accounting bodies and professional institutes all over the world have made attempts to define the objectives of financial statements and financial reporting which are vital to the development of financial accounting theory and practice. This section describes developments in this area at the international level, particularly USA, UK and Canada.

THE TRUEBLOOD REPORT

In view of the criticisms of corporate financial reporting and the realization that a conceptual framework of financial accounting and reporting was needed, the AICPA formed two study groups in 1971 — one was called The Study Group on the Establishment of Accounting Principles, headed by Francis M. Wheat (its recommendations which led to the establishment of the FASB and the other was called 'The Study Group on the Objectives of Financial Statements', headed by Robert M. Trueblood. The report of the second group, called the Trueblood report was published in October 1973. This Committee was asked to consider the following four questions:

1. Who need financial statements?
2. What information to they need?
3. How much of the needed information can be provided by accountants?
4. What framework is required to provide the needed information?

The Committee was charged with the development of the objectives of financial statements.

The Committee comprised nine members representing industry, the accounting profession, the academics, and the Financial Analysts Federation. The staff was drawn from academicians, practitioners, and consultants. Views of more than 5000 corporation and other organizations were solicited by the Committee. It conducted more than 50 interviews and held 35 meetings with interested institutional and professional groups.

The Trueblood Committee recommended twelve objectives.

The main objective is stated as under:

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

The other eleven objectives are stated below:

1. An objective of financial statements for governmental and not-for-profit organizations is to provide information useful for evaluating the effectiveness of the management of resources in achieving the organization's goals. Performance measures should be quantified in terms of identified goals.
2. An objective is to provide a statement of financial activities useful for predicting, comparing, and evaluating enterprise earning power. This statement should report mainly on factual aspects of enterprise transactions having or expected to have significant cash consequences. This statement should report data that require minimal judgment and interpretation by the prepare.
3. All objective is to provide a statement of financial position useful or predicting, comparing, and evaluating enterprise earning power. This statement should provide information concerning enterprise transactions and other events that are part of incomplete earnings cycles. Current values also be reported when they differ significantly from historical cost. Assets and liabilities should be grouped or segregated by the relative uncertainty of the amount and timing of prospective realization of liquidation.
4. An objective of financial statements is to provide users with information for predicting, comparing, and evaluating enterprise earning power.
5. An objective of financial statements is to provide information useful for the predictive process. Financial forecasts should be provided when they will enhance the reliability of users' predictions.
6. An objective is to provide a statement of periodic earnings useful for predicting, and evaluating enterprise earning power. The net result of completed earnings cycles and enterprise activities resulting in recognizable progress toward completion of incomplete cycles should be reported. Changes in the values reflected in successive statements of financial position should also be reported, but separately, since they differ in terms of their certainty of realization.
7. An objective of financial statements is to provide factual and interpretive information about transactions and other events which is useful for predicting, comparing, and evaluating enterprise earning power. Basic underlying assumptions with respect to matters subject to interpretation, evaluation, prediction, or estimation should be disclosed.
8. An objective of financial statements is to supply information useful in judging management's ability to utilize enterprise resources effectively in achieving the primary enterprise goal.
9. An objective of financial statements is to provide information useful to investors and creditors for predicting, comparing, and evaluating potential cash flows to them in terms of amount, timing, and related uncertainty.
10. 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 activity.
11. An objective of financial statements is to report to those activities of the enterprise affecting society which can be determined and described or measured and which are important to the role of the enterprise in its social environment.

The Trueblood Report also presented seven qualitative characteristics which the financial statement information should possess in order to satisfy user needs.

1. Relevance and Materiality
2. Substance rather than Form
3. Reliability
4. Freedom from Bias
5. Comparability
6. Consistency
7. Understandability

THE CORPORATE REPORT, LONDON, 1975

Great Britain had a new look at the corporate objectives. The Accounting Standards Steering Committee (ASSC) of the Institute of Chartered Accountants in England and Wales (ICAEW) published the Corporate Report as a discussion paper to review the list of users, purposes, and methods of modern financial reporting in the United Kingdom.

The purpose of this study undertaken by an eleven-member working party was to re-examine the scope and aims of published financial reports in the light of modern needs and conditions; to determine the public accountability of economic entities of all kinds, but especially business enterprises; to identify the persons or groups for whom published financial reports should be prepared; and to consider the most suitable means of measuring and reporting the economic position, performance and prospects of undertakings for the purposes and persons identified above.

The basic philosophy of the Report was that financial statements should be appropriate to their expected use by the potential users, i.e. they should attempt to satisfy the informational needs of their users. The report assigned responsibility for reporting to the "economic entity" having an impact on society through its activities. It further defined users as those who have a reasonable right to information and whose information needs should be recognized by corporate reports.

To satisfy the fundamental objectives of annual reports set by the basic philosophy, seven desirable characteristics of a corporate report were cited, viz, relevance, understandability, reliability, completeness, objectivity, timeliness, and comparability.

The Corporate Report rejected the assumption that general purpose financial statements can satisfy the information needs of all user groups. It suggested the need for the following additional statements:

1. An employee report dealing with size and composition of work force, efficiency, productivity, industrial relations, the benefits earned, personnel policies, etc.
2. A statement of transactions in foreign currency showing overseas borrowings and repayment, dividends received and paid by the government to other countries.
3. A statement of corporate objectiveness showing management policy and strategies.
4. A Statement of Value Added to show how the wealth was produced, and how it has been distributed among employees, the state, the providers of capital and its reinvestment for maintenance and expansion.
5. A statement of money exchanges with government showing sales tax, corporation tax, rates, royalties and other taxes paid to government, i.e., financial relationship between the enterprise and the state.
6. A statement of future prospects showing forecasts of profits, employment and investment.

The report draws attention to the concept of "social accounting" and makes an attempt to move in that direction. The report rejected, after assessing measuring bases against theoretical acceptability, utility and practicability, the use of historical cost in favour of current values.

Greater emphasis in USA is on investors and creditors, while in UK it is on all types of users. The emphasis in UK according to this report, is on accountability of economic entities. "Accountability arises from the social role of the entity and not solely from legal requirements." The report states:

Such organizations, which exist with the general consent of the community are afforded special legal and operational privileges, they compete for resources of manpower, materials and energy, and they make use of community owned assets such as roads and harbours.

It is claimed in the USA that taking care of the information needs of the investors and creditors will automatically protect the interests of other users. The SFAC No. 1 has already moved in the direction of protecting the interests of other users by adding the words "and other users". (See para 34.)

In fact, the USA in the past decade has been moving steadily towards the social accounting concept. Hence, the 'additional statements' required in the Corporate Report (barring No. 3 and 4) are being taken care of in the chairman's speech, directors' report, etc. In India, some large companies in the private and the public sector, disclose their accounting policies, social welfare programmes, social income statements and social balance sheets in their annual financial statements.

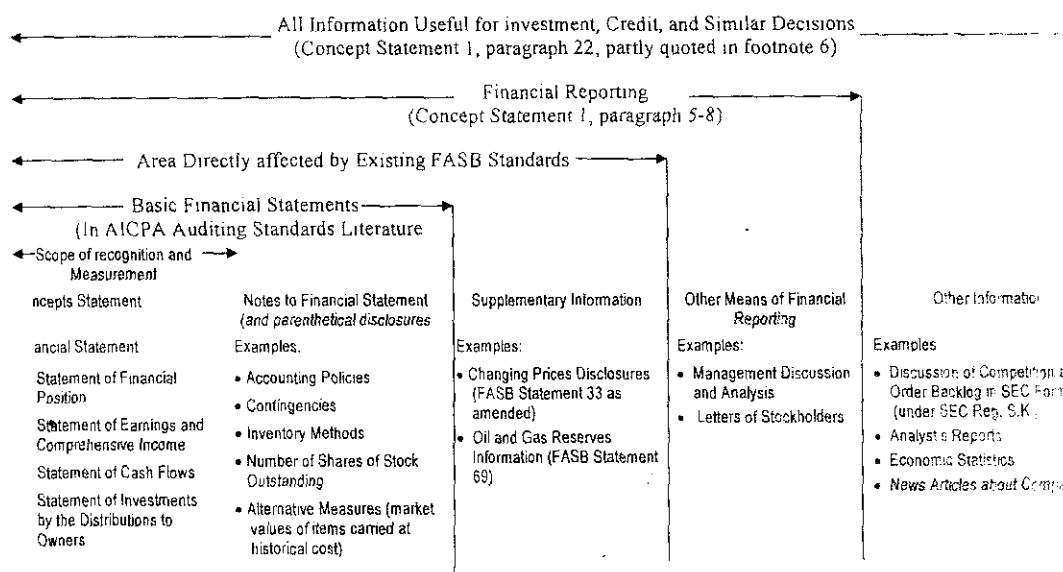
In conclusion, thought it was felt that "a comparison of the principal findings and recommendations of the Corporate Report and the Trueblood Report cannot be made without considering the different economic and political environments in Great Britain and the United States", we feel that the two are coming closer towards disclosing the economic and social impact of an entity's activities to investors, users, and others (such as employees, community, customers and the society).

The argument about 'why business should be made to pay for providing such additional information required by the Corporate Report' is also losing validity in view of the growing social responsibility of business.

FASB Concepts Statement No.1: 'Objectives of Financial Reporting by Business Enterprises, November 1978'

After consideration of the Trueblood Committee Report and the responses to the discussion memorandum (DM) on the report, the FASB issued Tentative Conclusions on Objectives of Financial Statement of Business Enterprises in 1976. Two years later, the FASB issued SFAC No. 1. The SFAC No. 1 was not limited to the contents of financial statements. Para 39 of the Statement said "Financial reporting includes not only financial statements but also other means of communicating information that relates, directly or indirectly, to the information provided by the accounting system—that is, information about an enterprise's resources, obligations, earnings, etc. See Exhibit 11.1 for details.

Exhibit 11.1



The SFAC No. 1 laid down the following objectives:

- Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions. The information should be comprehensible to those who have a reasonable understanding of business and economic activities and are willing to study information with reasonable diligence (paragraph 34.)
- Financial reporting should provide information to help present and potential investors and creditors and other users in assessing the amounts, timing, and uncertainty of prospective cash receipts from dividends or interest and the proceeds from the sale, redemption, or maturity of securities or loans. The prospects for those cash receipts are affected by an enterprise's ability to generate enough cash to meet its obligations when due and its other cash operating needs, to reinvest in operations, and to pay cash dividends and may also be affected by perceptions of investors and creditors generally about that ability, which affect market prices of the enterprise's securities. Thus financial reporting should provide information to help investors, creditors, and others assess the amount, timing, and uncertainty of prospective net cash inflows to the related enterprise (paragraph 37.)
- Financial reporting should provide information about the economic resources of an enterprise, the claims to those resources (obligations of the enterprise to transfer resources to other entities and owners' equity), and the effects of transactions, events, and circumstances that change resources and claims to those resources (paragraph 40.)
- Financial reporting should provide information about an enterprise's financial performance during a period. Investors and creditors often use information about the past to help in assessing the prospects of an enterprise. Thus, although investment and credit decisions reflect investors' and creditors' expectations about future enterprise performance, those expectations are commonly based at least partly on evaluations of past enterprise performance (paragraph 42.)
- The primary focus of financial reporting is information about an enterprise's performance provided by measures of earnings and its components (paragraph 43.)

- Financial reporting should provide information about how an enterprise obtains and spends cash, about its borrowing and repayment of borrowing, about its capital transactions, including cash dividends and other distributions of enterprise resources to owners, and about other factors that may affect an enterprise's liquidity or solvency (paragraph 49).
- Financial reporting should provide information about how management of an enterprise has discharged its stewardship responsibility to owners (stockholders) for the use of enterprise resources entrusted to it (paragraph 50).
- Financial reporting should provide information that is useful to managers and directors in making decisions in the interest of owners (paragraph 52).

In brief, the main objectives can be restated as follows:

1. To provide information which is useful to investors, creditors, and others in making rational decisions.
2. To assist investors and creditors in assessing future net cash flows to the enterprise in respect of amount, timing, and uncertainty.
3. To identify entity resources (assets) and claims (owner's equity).
4. To show how an enterprise obtains resources and what it uses them for.
5. To provide information about enterprise performance and earnings potential.

Objectives number 3, 4 and 5 are achieved directly by means of preparing a balance sheet, cash flow statement and income statement respectively. Objectives number 1 and 2 are achieved by using these financial statements and other reports taken together.

The recommendations of the Trueblood Committee were interpreted to mean (this impression was confirmed by public utterances of some of the committee members) that the authors of the report were advocating a return to cash account. This impression was corrected by the FASB in its SFAC No. 1 by firmly adopting accrual accounting as the basis of financial reporting. However 'cash flow accounting' is a different concept of accounting and reporting. However 'cash flow accounting' is a different concept of accounting and reporting. It adopts the accrual basis but rejects the allocation basis of accounting. Perhaps some members mistook cash flow accounting as cash accounting.

The SFAC No. 1 also highlights that:

- Financial reporting is not an end in itself but is intended to provide information that is useful in making business and economic decisions.
- The objectives of financial reporting are not immutable—they are affected by the economic, legal, political, and social environment in which financial reporting takes place.
- The objectives are also affected by the characteristics and limitations of the kind of information that financial reporting can provide.
- The objectives in this statement are those of general purpose external financial reporting by business enterprises.
- The terms "investor" and "creditor" are used broadly and apply not only to those who have or contemplate having a claim to enterprise resources but also to those who advise or represent them.
- Although investment and credit decisions reflect investors and creditors expectations about future enterprise performance, such expectations are commonly based at least partly on evaluations of past enterprise performance.
- The primary focus of financial reporting is information about earnings and its components.
- Information about enterprise earnings based on accrual accounting generally provides a better indication of an enterprise's present and continuing ability to generate favourable cash flows than information limited to the financial effects of cash receipts and payments.
- Financial reporting is expected to provide information about an enterprise's financial performance during a period and about how management of an enterprise has discharged its stewardship responsibility to owners.
- Financial accounting is not designed to measure directly the value of a business enterprise, but the information it provides may be helpful to those who wish to estimate its value.
- Investors, creditors, and other may use reported earnings and information about the elements of financial statements in various ways to assess the prospects for cash flows. They may wish, for example, to evaluate management's performance, estimate "earning power", predict future earnings, assess risk, or to confirm, change, or reject earlier predictions or assessments. Although financial reporting should provide basis information to aid them, users do their own evaluating.

Management knows more about the enterprise and its affairs than investors, creditors, or other "outsiders" and,

accordingly, many often increase the usefulness of financial information by identifying certain events and circumstances and explaining their financial effects on the enterprises.

THE STAMP REPORT, 1980, CANADA

A report on "Corporate Reporting: Its Future Evolution", written by Edward Stamp, was published in June 1980 by the Canadian Institute of Chartered Accountants (CICA).

The Report states the following major objectives:

1. The objectives of financial reporting should be taken to be directed toward the needs of users who are capable of comprehending a complete (and necessarily sophisticated) set of financial statements or alternatively, to the needs of experts who will be called on by the unsophisticated users to advise them.
2. One of the primary objectives of published corporate financial reports is to provide an accounting by management to both equity and debt investors, not only a management's exercise of its stewardship function but also of its success (or otherwise) in achieving the goal of producing a satisfactory economic performance by the enterprise and maintaining it in a strong and healthy financial position.
3. It is an objective of good financial reporting to provide such information in such a form as to minimize uncertainty about the validity of the information, and to enable the user to make his own assessment of the risks associated with enterprise.
4. It is therefore necessary that the standards governing financial reporting should have ample scope for innovation and evolution as improvements become feasible.

It will be seen that these objectives concern accountability, uncertainty and risk; change and innovation; and complexity and the unsophisticated users respectively.

The Report has expressed the view that the FASB's conceptual framework is not suitable for Canada because of the environmental, historical, political, and legal differences between the two countries. Corporate Report, 1975, London had also expressed similar views. Because of the broader accountability concept in Canada, the range of users is also broader. The users in Canada include present and potential shareholders; long-term and short-term creditors; present analysts and advisers serving the above; past, present and potential employees and customers; present and potential non-executive directors; suppliers; present industry groups: labour unions, governmental departments and ministers, the public, regulatory agencies; other companies, both domestic and foreign; standard setters and academic researchers.

The following categories of user needs are proposed: assessing performance; assessing management quality, estimating future prospects; assessing financial strength and stability; assessing solvency; assessing liquidity; assessing risk and uncertainty; aiding resource allocation; making comparisons; making valuation decisions; assessing adaptability, determining compliance with the law or regulations and assessing contribution to society.

To test whether the published financial statements are meeting the needs of users and the objectives of financial reporting, the information in the financial statements should meet the following criteria: objectivity, comparability, full disclosure, freedom from bias, uniformity, materiality and cost-benefit effectiveness, flexibility, consistency and conservatism.

The FASB's conceptual approach was deemed too normative and too narrow in scope. It was concerned primarily with the investors. The Canadian framework is evolutionary and concerned with the reasonable needs of the legitimate users of financial reports.

The Stamp Report has been regarded by some, as impractical or too costly to implement. The Corporate Report London, was also regarded likewise.

BENEFITS OF FINANCIAL REPORTING

The financial reporting, if adequate and reliable, would be useful in many respects. Benefits of financial reporting may be listed as follows.

1. Managers Decisions

The accounting data published in financial reports may have economic effects through its impact on the behaviour of the managers of corporate enterprises. The inclusion of accounting numbers in management compensation schemes, or the fear of market misinterpretation of accounting reports may influence a manager's operating and financing decisions. Shareholders prefer accounting procedures that mirror economic events as closely as possible. However, shareholders also must be concerned that the managers might manipulate the reported data to increase their compensation. Therefore, shareholders, like creditors and union leaders, also want numbers that are reliable and objectively determined. Considering the problems of obtaining measurements of income and net worth that are both objectively determined and valid representations of economic reality, it seems likely that management and shareholders would adopt compensation schemes that recognise the limitations of the data, such that the expected payments conform to the market price for managerial services.

To sum up, information contributes much towards better investment decision making, promoting understanding and creating an environment to cooperate. Financial reporting generates confidence and has favourable effect on the company's cost of capital. In the long run, financial reporting can retain its credibility only if it does what is designed to do—provide society with relevant and reliable information about economic events and transactions—and does not attempt to move the economy in one direction rather than another. Donald Kirk, the former Chairman of the FASB, made this point in 1979:

“The role of financial reporting is to provide information that assists in assessing the relative returns and risks of various investment opportunities. Business manager, investors, and creditors make those decisions: It is not a function of financial reporting to try to determine or influence their outcome. No matter how well intentioned the standard setter may be, if information is well designed to indicate that investment in a particular enterprise involves less risk than it actually does, or designed to encourage investment in a particular segment of the economy, financial reporting will suffer an irreparable loss of creditability.”

2. Economic Decisions Making

The ultimate goal of any economy is to maximize the social welfare for which an efficient allocation of resources is required. This goal is of particular significance in developing economies where resources are not plentiful. The availability of capital is one of the scarce and major productive factors needed to pursue economic activity and to achieve the goal of efficient allocation of resources. Companies compete in the securities market to obtain their capital as easily as possible. Since owners of capital, like business enterprise, attempt to maximize their own wealth and well-being, they require information to help them in making sound economic decisions. This process is assumed to lead to the broader social goal of efficient allocation of resources throughout the economy.

Mautz and May observe:

“Financial disclosure is essential to the functioning of a free enterprise economy. One aspect of a market oriented economy is the allocation of a capital on a market basis. Financial disclosure is required to support a viable capital market is essential to resource allocation within the economy. It is in the capital market that a major portion of the nation's resources are allocated to those companies which serve customers effectively, and capital is refused to those companies who do not serve customers effectively.

The two important economic decisions that influence allocation of resources and which external users usually make are (a) security investment (b) credit decision. AICPA Study Group states that “the basic objective of financial statement is to provide information useful for making economic decision..”² Sound economic decisions require assessment of impact of current business activities and developments on the earning power of a company. Both economic decisions required detailed information to determine benefits (to be received) in lieu of sacrifices (resources given). Information about economic resources and obligations of a business enterprise is also needed to form judgments about the ability of the enterprise to survive, to adapt, to grow and to prosper amid changing economic conditions. In this task, financial reporting can provide information important in evaluating the strength and weakness of an enterprise and its ability to meet its commitments. It can supply information about transactions within the business and factors outside the company such as taxation policy, trade restrictions, technological changes, market potentialities etc., which affect the earning power of a business enterprise.

3. Customer Decisions

The data presented in financial statements may affect the decision of a company's customers and hence have economic consequences. Customer's like employees, may use financial statement data to predict the likelihood and/or timing of a firm going bankrupt or being unable to meet its commitments. This information may be important in estimating the value of a warranty or in predicting the availability of supporting services or continuing supplier of goods over an extended period of time. Financial institutions also may use the financial statements to assess their present and future solvency and hence, the likelihood that they will be able to repay funds or meet promises as contracted. It is likely that the sophisticated customers will be able to see through arbitrary or misleading accounting practices. Unsophisticated customers, however, may be misled by accounting procedures, particularly when newly adopted procedures result in sudden changes in reported data. With respect to customer decisions the economic consequences of accounting procedures are likely to be limited to the period of uncertainty that occurs when a change is instituted. Even then, sophisticated customers are not likely misinterpret the change.

4. Employee Decisions

Employee decisions may be based on perceptions of a company's economic status acquired through financial statements. In particular prospective and present employees may use the financial reports to assess risk and growth potential of a company and therefore, job security and future promotional possibilities. These decisions affect the allocation of

human capital in the economy. Labour unions and individual employees may use financial statement data as a basis for making contractual wage and employment benefit demands. Should this occur, data that incorrectly reflect the economic position and prospects of an enterprise may mislead employees into making or justifying unrealistic demands.

Furthermore, unionized companies showing large increases in earnings are likely to be faced with successfully negotiated demands for large wage increases. Hence, as regards employee decisions, accounting techniques that result in greater fluctuations in reported earnings appear to be costly to shareholders, sharp increases in profits are likely to generate demands for large wages increases, while sharp decreases may lead to employee fears of bankruptcy or financial difficulties. Management also want to avoid charges of manipulation of net profit data. Thus, an apparently objectively determined series that tends not to change sharply is desirable. Historical cost based accounting meets these requirements.

5. Cost of Capital

Adequate disclosure in annual reports is expected, in the long run, to enhance market price of company shares in the investment market. Higher prices of company shares resulting from the full disclosure will have a favourable impact on the company's cost of capital. It also enhances the future marketability of subsequent issue of company's shares. Choi argues that if analysts are kept well informed then, over the long run, an individual company's share prices will be relatively higher. Higher security prices would mean that a primary security issue could be priced higher and that the net proceeds from the issue would be higher. Thus the firm would experience larger receipt from a given issue and hence experience a lower cost of capital.

A Report for Arthur Anderson and Company stated:

"Consistently good financial reporting should have a favourable long-run effect on the company's cost of capital. Over a period of time, good reporting leads to informed investors who, because they understand the company, will pay a fair price for its securities. . . . Minimum or inconsistent reporting often leads to some loss of investors' confidence in the quality of company information and, ultimately in the price they will pay in the market. Creditability is a subtle intangible of great importance to any company, corporate reporting practices have a major effect on it. . . . We have often observed this connection between creditability, corporate reporting, and the cost of capital. . . . Good corporate reporting is a long-term policy applicable to good times and bad.

Thus data expansion would have a favourable effect on the cost of capital. However, some doubts have been expressed about the disclosure regulation (for increased disclosure) resulting in a lower cost of equity capital. It is argued that managers have strong incentives to minimize the possibility of shareholder unrest by controlling the flow of information to eliminate fluctuations in performance measures, thereby misleading shareholders with respect to the relative riskiness of the firm. If managers manipulated, or simply did not publish adverse financial data to hide poor performance from investors, subsequent disclosure of such information due to the passage of some regulation might result in a lower market price for the related shares and a higher cost of equity capital. Similarly, if managers attempted to avoid or manipulate disclosure in the hope that this practice would cause investors to perceive the firm to be less risky than it really is, subsequent disclosure might well result in higher risk as perceived by investors. This increase in perceived risk presumable would result in an increase in the cost of equity capital to the firm. Manipulation and/or misrepresentation, once discovered, will lead to loss of investor confidence in the quality of company information and that, in turn, will lower the price they will pay for its securities.

Thus, the above discussion implies that a disclosure regulation would be expected to have a favourable effect on the cost of equity capital of the affected firms. Implicit in this discussion is the assumption that a disclosure regulation would result in an improvement in the financial disclosure of the affected firms. A study conducted by Dhalwal to examine the impact of disclosure regulations on the cost of equity capital of affected firms concluded that segment disclosure requirement had a favourable effect on the cost of equity capital because disclosure requirement improved the quality of financial disclosure of affected firms and that, in turn, it reduced uncertainty about their stocks.

6. Fluctuations in Share Price

Adequate disclosure will tend to minimize the fluctuations in company's share prices. Fluctuation in share prices occurs because of the ignorance prevailing in the investment market. Fluctuations show an element of uncertainty in investment decisions. If the securities market are in possession of full information, the ignorance and uncertainty will be reduced and share prices will tend to maintain equilibrium. Besides, increased disclosure would prevent fraud and manipulations and would minimize chances of their occurrences. Additionally, all investors would be treated equally as far as the availability of significant financial information is concerned. Ethics in disclosure demands that no caste system for release of corporate information-telling the sophisticated first and the general public later or not at all-should be followed by corporate managements.

GENERAL PURPOSE FINANCIAL REPORTING

Generally speaking, the term financial reporting is used to mean general purpose external financial reporting. Often it is said that the purpose of financial reporting is the preparation of general purpose reports for external users. Reports

the fact that financial reports are mainly intended (legally) for shareholders, they can be, and are, used by a number of other external users. Existing and potential shareholders use company annual reports to evaluate the investment potential of a company's shares, creditors and lenders to assess the creditworthiness and liquidity, government to administer the company law provisions, employees to decide matters like collective bargaining and employment prospects, etc. Table 11.2 shows some of the decisions which different groups of users make.

It is still debatable whether a single set of financial statements could serve the interest of all external users. It is possible that some users may find the financial reports more useful than the others. However, it has been forcefully argued and empirically proved that all external users have something in common while making investment decisions and fulfilling their needs. Therefore, although the users maybe of different types, they have certain similar information needs. The Statement of Financial Accounting Concept No. 1 of FASB (USA) states that "general purpose external financial reporting. Their decisions and their uses of information are usually studied and described to a much greater extent than those of other external groups, as their decisions significantly affect the allocation of resources in the economy. In addition, information provided to meet investors and creditors needs is likely to be generally useful to members of other user groups who are interested in essentially the same financial aspects of business enterprises as investors and creditors.

Table 11.2
Decisions Made by Different Users Groups

User groups	Decisions
Shareholders	Share purchase or sale decisions; takeovers and mergers; assessing management performance.
Investment analysis	Analysis for advising clients on share purchase or sale decisions, takeovers and mergers, assessing management performance.
Creditors and other suppliers	Credit granting decisions; bankrupt risk assessments; terms for credit.
Competitors	Assessment of financial performance for competitive advantage.
Employees	Collective bargaining decisions; wages and conditions; security of employment.
Customers	Continuity of supply; assessment of economic and financial performance.
Government and its agencies	Taxation and subsidy policy; regulatory policy; employment and macroeconomic policy; environmental impact; financial performance.
Public	Social responsibility, environmental impact.

SPECIFIC PURPOSE REPORT

Financial reporting objectives in accounting literature so far has focussed on general purpose financial reporting which aims to satisfy the information needs of all potential users. Company law provisions in almost all countries of the world have consistently accepted the utility of general purpose financial reporting. Due to this the separate (specific) needs of specific users have been largely ignored on the assumption that general purpose reports can satisfy the information needs of all external users. However, a reasoning has also been made suggesting that the needs of specific users may be better served by presenting specific purpose reports to help them in their separately identifiable decision functions. For instance, financial reports submitted to obtain credit or loans, or government, or financial reports given to trade and industry, may not satisfy other users' needs and expectation.

However, the proposal of specific reports in company financial reporting is criticized on some counts.

Firstly, the cost of developing specialised reports to satisfy special requirements of specific users may exceed the benefits when the company financial reporting policy is determined in its totality. Secondly, specialised needs of specific users cannot be ascertained with any degree of certainty. Thirdly, issuing multiple reports about the financial results of an enterprise can create confusion among various users.

Fourthly, multiple reports may not be desirable and practicable from the standpoint of information economics.

To conclude, company financial reporting, in future, will continue to adhere to general purpose reporting system to aid investors, creditors, and other external users in their economic decisions. Meanwhile, in order to achieve the objectives of financial reporting (through general purpose reports) there is a continuous need to investigate many vital aspects relating to general purpose financial reports such as identifying potential users and user groups, identifying needs of such users, determining the feasibility of providing general purpose information to meet these needs, determining the manner of reporting such information, and having a feedback from the users regarding the use and relevance of general purpose information.

QUALITIES OF FINANCIAL REPORTING INFORMATION

As stated earlier, the objectives of financial reporting are concerned, in varying degree, with decision-making made by various users. However, there is a need to know that makes financial information useful for decision-making, i.e., what qualities or qualitative characteristics are needed to make the information useful and to help in achieving the purposes of financial reporting.

Informational qualities or qualitative characteristics make information reported through financial reporting a desirable commodity and guide the selection of preferred accounting methods and policies from among available alternatives. It is those qualities that distinguish more useful accounting information from less useful information.

Table 12.3 shows qualitative characteristics of accounting information as suggested by FASB (USA) in its Concept No. 2, issued in 1980.

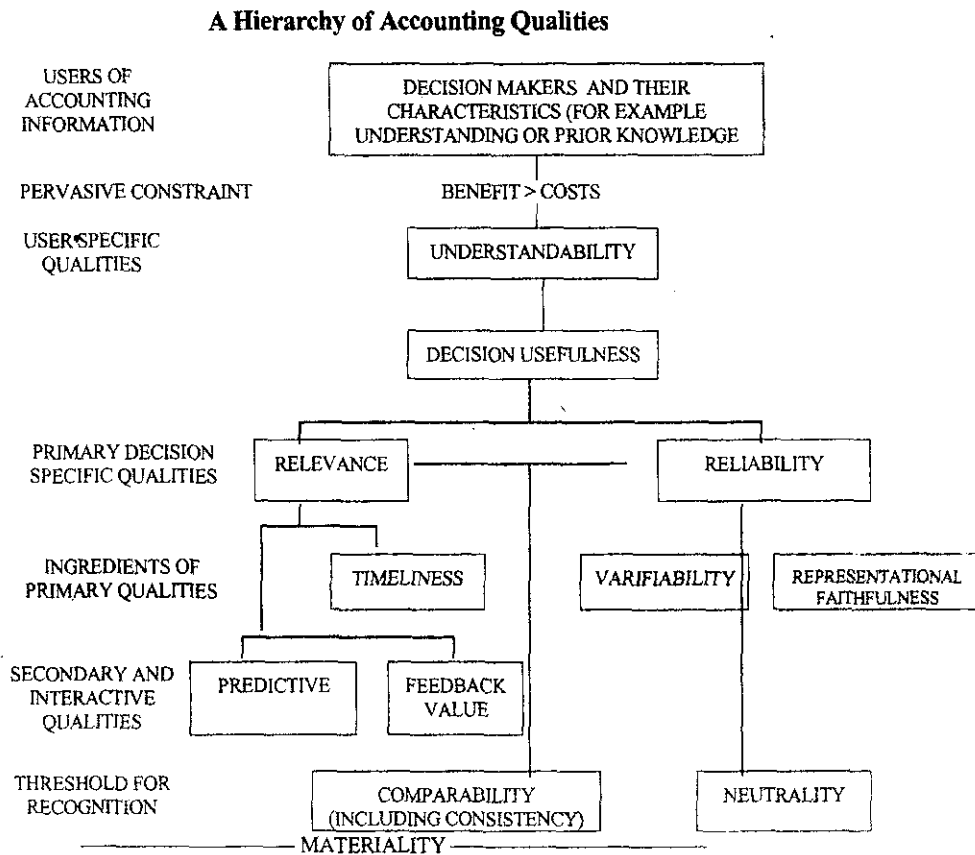
The qualities (or qualitative characteristics) that command wider acceptance and recognition for making information useful in financial accounting and reporting are as following:

1. **Relevance**

Relevance is closely and directly related to the concept of useful information. Relevance implies that all those items of information should be reported, that may aid the users in making decisions and/or predictions. In general, information that is given greater weight in decision-making, is more relevant. Specially, it is information's capacity to make a difference, that identifies it as relevant to a decision. American Accounting Association's Committee to Prepare A Statement of Basic Accounting Theory (1966) defines relevance as "the primary standard and requires that information must bear upon or be usefully associated with actions it is designed to facilitate or results desired to be produced." Financial Accounting Standards Board in its Concept No. 1 (para 47, 1978) comments:

Table 11.3

A Hierarchy of Accounting Qualities



Source: Financial Accounting Standards Board, Statement of Financial Accounting Concept No.2, Qualitative Characteristics of Accounting Information, Stanford: FASB, p.15.

"Relevant accounting information must be capable of making a difference in a decision by helping users to make predictions about the outcomes of past, present and future events or to confirm or correct expectation."

The questions of relevance arises after identification and recognition of the purpose for which the information will be used. It means that information relevant for one purpose, may not necessarily be relevant for other purposes. Information that is not relevant, is useless because that will not aid users in making decisions. The relevant information is

reduces decision-maker's uncertainty about future acts.

In today's complex financial accounting environment, a general purpose report aims to fulfil the common needs of users, so that information should be relevant to all users. In judging relevance of general purpose information, attention is focused on the common needs of users, and specific needs of particular users will not be considered in this relevance judgment. It is difficult to prepare a general purpose report, which may provide optimal information for all possible users, and which may command universal relevance. However, this has been recognised a potentially satisfactory solution.

To conclude, relevance is the dominant criterion in making decisions regarding information disclosure. It follows that relevant information must be reported. Relevance has been defined in accounting literature, but no satisfactory set of relevant items of information has been suggested. In this regard, an important task is to determine the needs of users(s) and the items of information that are relevant to target user(s).

2. Reliability

Reliability is described as one of the two primary qualities (relevance and reliability), that make accounting information useful for decision making. Reliable information is required to form judgements about the earning potential and financial position of a business firm. Reliability differs from item to item. Some items of information, presented in an annual report, may be more reliable than others. For example, information regarding plant and machinery may be less reliable, than certain information about current assets, because of differences in uncertainty of realisation. Reliability is that quality which permits users of data, to depend upon it with confidence, as representative of what it purports to represent. FASB Concept No. 2 concludes.

"The reliability of a measure rests on the faithfulness with which it represents what it purports to represent, coupled with an assurance for the user that it has that representational quality. To be useful, information must be reliable as well as relevant. Degrees of reliability must be recognised. It is hardly ever a question of black or white, but rather of more reliability or less. Reliability must be recognised. It is hardly ever a question of black or white, but rather of more reliability or less. Reliability rests upon the extent to which the accounting description or measurement is verifiable and representationally faithful."

FASB (USA) finds, that it is not always easy to maintain a clear distinction between relevance and reliability, yet it is important to try to keep the two concepts apart. To explain this point, the FASB (Concept No.2) illustrates further:

"Two different meanings of reliability can be distinguished and illustrated by considering what might be meant by describing a drug as reliable. It could mean that the drug can be relied on to cure or alleviate the condition for which it was prescribed, or it could mean that a dose of the drug can be relied on to conform to the formula shown on the label. The first meaning implies that the drug is effective at doing what it is expected to do. The second meaning implies nothing about effectiveness but does imply a correspondence between what is represented on the label and what is contained in the bottle."

There are many factors affecting the reliability of information such as, uncertainties inherent in the subject matter and accounting measurements. Accounting measurements, like others, may be subject to error. The possibility of error in measuring information and business events, may create difficulty in attaining high reliability of information. Adequate disclosure in annual reports, however, requires that users should be informed about the data limitations and the magnitude of possible measurement errors. The reliability concept does not imply 100 percent reliability or accuracy. Nondisclosure of limitations attached with information, for users in making economic decision and assessment of an enterprise's earning power.

Relevance and Reliability

As stated earlier, relevance and reliability are the two primary characteristics, that make accounting information useful for decision-making. Ideally, financial reporting should produce information that is both more reliable and more relevant. In some situations, however, it may be necessary to sacrifice some amount of one quality for a gain in another. Reliability and relevance, often impinge upon each other. Reliability may suffer, when an accounting method is changed to gain relevance, and vice versa. Sometimes, it may not be clear whether there has been a loss or gain, either of relevance or of reliability. The introduction of current cost accounting, will illustrate the point. Proponents of current cost accounting believe that current cost income from continuing operations, is a more relevant measure of operating performance, than is operating profit computed on the basis of historical costs. They also believe that, if holding gains and losses that they accrued in past periods, are separately displayed, current cost income from continuing operations better portrays operating performance. The uncertainties surrounding the determination of current cost, however, are considerable, and variations among estimates of their magnitude can be expected. Because of those variations, verifiability or representational faithfulness, both components of reliability, might suffer. Whether there is a net gain to users of the information, obviously depends on the relative weights attached relevance and reliability (assuming, of course, that the claims made for current cost accounting are accepted).

It has also been argued that there is no conflict between relevance and reliability concepts, when applied to financial accounting and reporting. There is empirical evidence to suggest that financial accounting concepts of relevance and reliability are complementary rather than conflicting in nature. That is, increase in relevance tend to be associated with increases in reliability and vice versa. The results of the study do not support that a substantial amount of one quality

must necessarily be sacrificed or traded off, in order to enhance the value of the other. Instead, both qualities may be enhanced simultaneously. An implication is that accounting policy-makers should not be content, with merely trying to improve the relevance of accounting disclosure. Resources must also be directed, toward the development and perfection of method designed to enhance the reliability of accounting measurement.

3. Understandability

Understandability is the quality of information that enables users to perceive its significance. The benefits of information may be increased by making it more understandable, and hence useful to a wider circle of users. Presenting information which can be understood only by sophisticated users and not by others, creates a bias which is inconsistent with the standard of adequate disclosure. Presentation of Information should not only facilitate understanding, but also avoid wrong interpretation of financial statements. Thus, understandable financial accounting information presents data that can be understood by users of the information and is expressed in a form and with terminology adopted to the user's range of understanding. The *Corporate Report* observe:

"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 judgment 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 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.

Understandability of information is governed by a combination of user characteristics, and characteristics inherent in the information. Understandability (and other qualities of the information), should be determined in terms of broad classes of users (decision-makers) rather than particular user groups. Since company financial reporting aims at general purpose external financial reporting, all relevant user's needs should be considered in deciding the understandability of the information, and no decision should be based on specific circumstances of individual decision-makers.

4. Timeliness

Timeliness means having information available to decision-makers, before it loses its capacity to influence decisions. Timeliness is an ancillary aspect of relevance. If, information is either not available when it is needed, or becomes available so long after the reported events that it has no value for future action, it lacks relevance and is of little or no use. Timeliness alone, cannot make information relevant, but a lack of timeliness, can rob information of relevant it might otherwise have had. Clearly, there are degrees of timeliness. Some reports need to be prepared quickly, say in case of a takeover bid or a strike. In some other contexts, such as routine reports by a business firm of its annual results, a longer delay in reporting information may materially affect the relevance and therefore, the usefulness of information. But any gain in relevance that comes with increased timeliness, may involve sacrifices of other desirable characteristics of information and result in an overall gain or loss in usefulness. For example, it may sometimes be desirable to sacrifice precision for timeliness, for an approximation produced quickly is often more useful than precise information, that is reported after a longer delay. If in the interest of timeliness, the reliability of the information is sacrificed a material degree, the usefulness of the information may be adversely affected. While every loss of liability diminishes the usefulness of information, it will often be possible to approximate an accounting information, to make it available more quickly without making it materially unreliable. As a result, its overall usefulness may be enhanced.

5. Neutrality

Neutrality is also known as the quality of "freedom from bias" or objectivity. Neutrality means that, in formulating or implementing standards, the primary concern should be the relevance and reliability of the information that results, not the effect that the new rule may have on a particular interest of user(s). A neutral choice between accounting alternatives is free from bias towards a predetermined result. The objectives of (general purpose) financial reporting serve many different information users who have diverse interests, and no single predetermined result is likely to suit all user's interests and purposes. Therefore, accounting facts and accounting practices, should be impartially determined and reported with no objective of purposeful bias, toward any user or user group. If there is no bias in selection of accounting information reported, it cannot be said to favour one set of interests over another. It may, in fact, favour certain interests, but only because the information points that way.

To say that information should be free bias, is not to say that standard setters or providers of information should not have a purpose in mind for financial reporting. In fact, information must be purposeful.

Neutrality neither means 'without purpose', nor does it mean that accounting should be without influence on human behaviour. Accounting information cannot avoid affecting behaviour, nor should it. If it were otherwise, the information would be valueless — by definition, irrelevant and — the effort to produce it would be futile. It is the negation of neutrality in accounting. To be neutral, accounting information must report economic activity as faithfully as possible, without colouring the image it communicates, for the purpose of influencing behaviour, in some particular direction.

For a standard to be neutral, it is not necessary that it treats everyone alike in all respects. A standard could require less disclosure from a small enterprise, that it does from a large one, without having its neutrality impugned. Nevertheless, in general,

standards that apply differently, need to be looked at carefully, to ensure that the criterion of neutrality is not being violated.

6. Comparability

An economic decision requires making a choice from among several possible courses of actions. In making decisions, the decision-maker will compare alternatives, aided or facilitated by financial information. Comparability implies, to have like things reported in a similar fashion, and unlike things reported differently. Hendriksen, observes that the primary objective of comparability is needed to facilitate the making of predictions and financial decisions by creditors, investors and others. FASB (USA) Concept No. 2 (para 115, 1980) defines comparability as "the quality or state of having certain characteristics in common, and comparison is normally a quantitative assessment of the common characteristics. Clearly, valid comparison is possible only if the measurement used — the quantities or ratios — reliable represent the characteristics that is the subject of comparison."

Comparable financial accounting information, presents similarities and differences, that arise from basic similarities and differences in the enterprise or enterprises and their transaction, and not merely from difference in financial accounting treatment. Information, if comparable, will assist the decision-maker to determine relative financial strengths and weaknesses and prospects for the future, between two or more firms or between periods in a single firm.

Efforts, therefore, should be directed towards developing accounting standards to be applied in appropriate circumstances, to facilitate comparisons and interpretation of data. Areas of differences in accounting practices, which are not justified by the differences in circumstances, should be narrowed.

7. Consistency

Consistency of method over period of time, is a valuable quality that makes accounting information more useful. Consistent use of accounting principles from one accounting period to another enhances the utility of financial statements to users, by facilitating analysis and understanding of comparative accounting data. It is relatively unimportant to the investor what precise rules or conventions are adopted by a company in reporting its earnings, if he knows what method is being followed and is assured that it is followed consistently from year to year. Lack of consistency produces lack of comparability. The value of inter-company comparisons is substantially reduced, when material differences in income are caused by variations in accounting practices.

The quality of consistency can be applied in different situations, e.g., use of same accounting procedures by a single firm or accounting entity from period, the use of similar measurement concepts and procedures for related items within the statement of a firm for a single period, and the use of same procedures by different firms. If a change in accounting practices or procedures is made, disclosure of the change and its effects permits some comparability, although users can rarely make adjustments that make the data completely comparable.

Although consistency in the use of accounting principles from one accounting period to another is a desirable quality, but if pushed too far, it will prove a bottleneck for bringing about improvements in accounting policies, practices, and procedures. The change to a preferred accounting method can not be made without sacrificing consistency; there is no way that accounting can develop without change: Users needs may change over time, which would require a change in accounting principles, standards and methods. These improvements are needed to serve users' needs in changing circumstances. When it is found that current practices or presentations being followed are not fulfilling users' purposes, a new practice or procedure should be adopted.

Thus, consistency and uniformity in accounting methods would not necessarily bring comparability. Instead of enforced uniformity, accounting standards should be developed which would be best or preferred methods, in most cases. Such accounting standards should be followed until a need arises to improve practices.

8. Materiality

The concept of materiality applies to the entire field of accounting and auditing. The materiality concept implies that, not all financial information needs to be or should be communicated in accounting reports — only material information should be reported. Immaterial information may and probably should be omitted. Only that information should be disclosed in the annual report, which is likely to influence economic decisions of the users. Information that meets this requirement is material.

In recent accounting literature, where relevance and reliability are held upon as the primary qualitative characteristics, that accounting information must have if it is to be useful, materiality is not recognised as a primary characteristics of the same kind. Materiality judgements are, primarily quantitative in nature. They are described as the relative quantitative importance of some piece of financial information to a user, in the context of a decision to be made. They pose the question: In this item large enough for users of information to be influenced by it? However, the answer to that question will usually be affected by the nature of the item, items too small to be thought material, if they result from routine transactions, may be considered material if they arise in abnormal circumstances. Thus, materiality of an item depends not only upon its relative size, but also upon its nature or combination of both, that is, on either quantitative or qualitative characteristics, or on both.

9. Verifiability

The quality of verifiability contributes to the usefulness of accounting information because the purpose of verification is to provide a significant degree of assurance that accounting measures represents, what they purport to represent.

Verification does not guarantee the suitability of method used, much less the correctness of the resulting measure. It does not convey some assurance that the measurement rule used, whatever it was, was applied carefully and without personal bias on the part of the measurer. In this process, verification implies and enhance consensus about measurements of some particular phenomenon. The Accounting Principles Board of USA defines verifiability as:

“Verifiable financial accounting information provides results that would be substantially duplicated by independent measurers using the same measurement methods.

According to FASB, “Verifiability means no more than the several measurers are likely to obtain the same measure. It is primarily a means to attempting to cope with measurement problems stemming from the uncertainty that surrounds accounting measures and is more successful in coping with some measurement problems than others. Verification of accounting information does not guarantee that the information has a high degree of representational faithfulness and a measure with a high degree of verifiability is not necessarily relevant to the decision for which it is intended to be useful.”

10. Conservatism

Conservatism is generally referred to as a convention that many accountants believe to be appropriate in making accounting decisions. According to APB (USA) Statement 4:

“Frequently, assets and liabilities are measured in a context of significant uncertainties. Historically, managers, investors, and accountants have generally preferred that possible errors in measurement be in the direction of understatement rather than overstatement of net income and net assets. This has led to the convention of conservatism.”

There is a place for a convention, such as conservatism — meaning prudence — in financial accounting and reporting, because business and economic activities are surrounded by uncertainty, but it needs to be applied with care. Conservatism in financial reporting should no longer connote deliberate, consistent, understatement of net assets and profits. Conservatism is prudent is a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered. Thus, if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimates. However, if two amounts are not equally likely, conservatism does not necessarily dictate using the more pessimistic amount rather than the more likely one. Conservatism no longer required deferring recognition of income beyond the time that adequate evidence of its existence becomes available, or justifies recognizing losses before there is adequate evidence that they have been incurred.

Evaluating the Qualitative Characteristics (Qualities)

The above-mentioned qualities make financial reporting information useful to users. These normative qualities of information are based largely upon the common needs of users. However, there are three constraints on full achievement of the qualitative characteristics:

- (i) conflict of objectives
- (ii) environmental influences and
- (iii) lack of complete understanding of the objectives.

The pursuit of one characteristic may work against the other characteristics. It is difficult to design financial reports which may be relevant to user needs on the one hand, and also be free from bias towards any particular user group, on the other. The qualitative characteristics should be arranged in terms of their relative importance. Desirable trade-offs among them should be determined.

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CHAPTER-12

Specific issues in Corporate Reporting

There are so many specific issues which have gained vital importance and wide recognition in company financial reporting in the recent years. In this chapter, some such issues have been covered.

Segment Reporting

In recent years, many business enterprises have broadened the scope of their activities to encompass different industries, foreign countries and markets. Due to the growth of diversified business and expansion of firms into foreign markets, consolidated information becomes non-homogeneous information. Consolidated statements enable the management to hide information from external reporting. Some segments may be running at a loss, but the consolidated statements will merely show the average profit figure (and other information) of all the segments taken together. It is, therefore, necessary that along with consolidated information segment information is also provided to the users.

Kochanek has stated that large companies with diversified product lines/marketing regions, which may differ from each other with respect to profitability growth potential and risk, evidently require segment reporting for highlighting different areas. Consolidated operating results from various product lines and markets do not provide a reasonable basis for analyzing the overall financial condition and making future estimates of cash flow. In the United States, the FASB, vide SFAS No. 14 (1976), has made the disclosure of segment information mandatory.

Need for Segment Reporting

Diversified companies present a peculiar and special problem for investment decision-making. The progress and success of a diversified company are composites of the progress and success of its several segments. Proponents of segment reporting contend that information about separate segments contributes to investor evaluations of diversified companies. The segmental disclosures in company annual reports are mainly useful to investors (in investment decisions) and other interested users, such as employees, customers, government, etc.

(1) Segment Disclosure and Investment Decision - Making

A major argument in support of segmental reporting is that if investors are provided with information about the profitability, risk and growth of the different segments of a company's operations, they will be better able to assess the earnings potential and the risk of the company as a whole. They will be able to predict more accurately a firm's future earning and cash flows than can be done by using consolidated data alone. Investor uncertainty about company prospects will thus be reduced, share prices will be set more accurately, and a more efficient allocation of resources will be promoted.

(2) Segments Disclosure and Other Users (Other than Investors)

Besides the investors, it has been suggested that segmental reports are likely to be useful to employees and trade unions, consumers, the general public, government and also for the purpose of promoting managerial efficiency. Employees and trade unions are interested in the performance and prospects of the firm from the standpoint of wage negotiations and job security and hence, segmental reports may be just as relevant to them as to investors. There is also a need for information on segmental performance so that policy decisions by management to develop or curtail particular activities can be verified and understood. Lack of information, on the other hand, may lead to distrust and labour relations problems.

The interest of consumers and the public may also be promoted by segmental disclosure in the sense the social responsibility in terms of the removal of price discrimination could be encouraged by disclosure of profits by segment. Consumers may also benefit from the increased competition that may result.

Government, at national and also international level in the case of multinational companies, are becoming increasingly concerned by the activities of large companies and the balance of payments. Segmental disclosures by geographical location seem likely to promote a better understanding of corporate strategy and its impact, and will thus provide a more reliable base for governmental policy-making. Furthermore, legislation relating to mergers and acquisition and competition policy seems likely to be more effective if based on more comprehensive information.

Finally, managerial efficiency may be promoted by the attention to corporate strategy that the publication of segmental reports will encourage. Management may also be concerned to evaluate their internal management control system. The provision of segmental reports will necessitate managerial evaluation of cost allocation procedures and the bases on which transfer prices between segments are calculated. Perhaps the most important contributing factor to efficiency could be the increased competition that may result from segmental disclosures with consequent benefits to

the economy as a whole. The effect of this competition may not be harmful, as all companies will be similarly placed. It may also redress, to some extent, the competitive disadvantage experienced by the unitary company, with no business or geographical diversification, as compared to the multinational company whose operations have become progressively complex but whose financial statements are not correspondingly representative.

Objectives of Segment Reporting

Chasteen states that when a company's operations take place in several different industries or are located in different geographic areas, the difficulty of analyzing its financial condition, operating trends, the financial ratios can be greatly increased. The various industry segments or geographic areas of operation of the company can have different rates of profitability, different levels and types of risk, and different opportunities for growth. Such differences may be difficult to identify when only consolidated financial data is available for analysis. As a result, financial statement users believe that consolidated data is more useful when supplemented by disaggregated information to help them analyze the amounts, timing, and uncertainties of expected cash flows and risks associated with an investment or loan to a company that operates in different industries or different geographic areas. Segment reporting aims to provide this disaggregated information.

Bases of Segmenting

The following are, generally, the bases of segmenting:

Product lines: If a company has diversified its production activities, and is manufacturing different and distinct types of products, financial information can be provided on the basis of product lines. A good example, is that of the Delhi Cloth and General Mills Ltd., which manufactures cloth, computers, automobiles, PVC, and other engineering products, and would thus need this kind of segment reporting.

Geographical divisions: If a company has operations extended in foreign markets, geographical division-wise segmentation will be relevant. This will be more relevant in the case of multinational corporations and other big companies with extensive overseas operations. Even within a country (if it is big); there can be region-wise segmentation for better management and reporting purposes.

Customer-type: Classification may be relevant in case of those who look for comparability among firms. In this case a uniform standard industrial classification is necessary. Comparability can be among firms of the same (absolute) size and type of operations. For investors, however, that classification which permits the greatest degree of predictability will be the most relevant.

Advantages and Problems of Segmentation

The main advantages of segmentation are that it enables prediction of future cash flows and risk in decision models, and makes comparability useful.

Some problems in the reporting of income for different segments of a business, of course, are related to the allocation of joint costs and the treatment of interdivisional transfer pricing. To be able to measure profitability of segments separately, it is necessary that their net assets are reported segment-wise. There are, however, difficulties in the measurement of assets.

Difficulties in Segment Reporting

The difficulties involved in segment reporting relate to implementation of segment reporting rather than to its concept and theory. Some difficulties are listed as follows:

- (1) **Base (or Bases) or Segmentation:** How a diversified company would be fractionalized for reporting purposes, is a problem in segment reporting. A diversified company may be divided for segment reporting purposes in terms of organisation division, industry, market, customer product, etc. Each base of segmentation may create segments that differ significantly in profitability, growth and risk and each implies a different basis for identifying segments. Moreover, more than one form of diversification may be present in the same. Unless the base (or bases) selected actually represent the company and the way it operates, unless they reflect the difference within the company regarding rate of profit, degree of risk, and potential for growth, reports of operating data by segments are unlikely to be of any real use.
- (2) **Allocation of Common Costs:** In a business enterprise producing more than one product or engaged in different activities, there are likely to be costs which are common to two or more of the products. Examples of common costs are general administrative and selling expenses, legal expenses, general advertising etc. Because these costs are common to more than one segment, they cannot be associated in entirety with a single segment. The problem of allocating common costs is greater for some items than for others. It is particularly great for

assets, liabilities, and equity so that reporting for business segments is suggested less often for information from the balance sheet, statement of shareholders equity, and funds statements than for information from the income statement. Because of the diversity of methods employed, cross-company comparison of similar segments are likely to be misleading and the reliability of segment operating results varies depending on how closely the basis of allocation approximates results that would have been produced by market transaction.

- (3) **Pricing Inter-segment Transactions:** A diversified company composed of disparate parts, each of which goes its own way, might have very few inter-company transactions. On the other hand, there might be some diversified business enterprise which may have very substantial transactions among and between the segments. There are different methods for intersegment transfers such as cost, cost plus, market price, and negotiated price. The basic purpose (in selecting a method of transfer pricing) is to motivate employees, and to actually measure the success of the several segments as accurately as possible. Different methods results in different operating results for the segments. For a meaningful segment reporting, there is a need for selecting a reasoned method for inter-segment transfer.
- (4) **Costs of Segment Disclosure:** Further arguments against segmental reporting are concerned with the costs of disclosure. The provision of additional information will, undoubtedly, increase a firm's operating costs in terms of the costs of collection, processing, audit and dissemination.

Another important cost argument relates to the increased competition that may result from segmental disclosures. It is argued that the disclosure of profitable segments will attract competitors, whilst loss-making segments may become the subject of take-over bids or put pressure on management to sell them off, with the purpose of improving profits in the short-term and to take on less risky projects. A competitive disadvantage may also occur where foreign companies are not required to provide segmental reports.

- (5) **Management Conservatism:** Another argument is that, where there is no regulatory provision to disclose segmental reports, voluntary disclosures are likely to be perceived by management to be beneficial only in certain instances; for example, where management believes that the company's attractiveness to investors will be enhanced and the costs of finance reduced. Few companies are likely to take voluntary action that may benefit their competitors or reveal weaknesses.

Segment Information in the United States

Though segment-wise information is reported in the annual financial statements of all major countries in one form or another, a definitive standard providing guidelines for segment reporting has been issued in the United States. FASB's SFAS No. 14 is the main standard issued in 1976 for reporting of disaggregated financial information relating to a company. Several additional standards have subsequently been issued as amendments to Statement No. 14, SFAS Nos. 18, 21, 24 and 30. Finally SFAS No. 131 has been issued in 1997.

The APB Opinion No. 30 defined a segment of business as a component of an entity whose activities represent a separate major line of business or class of customers, or a department, provided that its assets, results of operations and activities of the entity.

Other terms, such as, 'lines of business', 'product line', and 'business line' have also been used. Segment reporting is defined as 'financial reporting on a less-than-total-enterprises basis' by the FASB. An industry segment is a component of an enterprise engaged in providing a product or service, or group of related products and services primarily to 'unaffiliated customers', i.e., customers outside the enterprise, for a profit.

The purpose of the information required to be reported by SFAS No. 131 is assist financial statement users in analyzing and understanding the enterprise's financial statements by permitting a better assessment of the enterprise's past performance and future prospects.

The information required to be reported by Standard No. 131 is a disaggregation of the consolidated financial information included in the enterprise's financial statements. The accounting principles underlying the disaggregated information should be the same accounting principles as those underlying the consolidated information.

The SFAS No. 131 requires that when a company issues a financial year-end balance sheet, income statement, and statement of changes in financial position in conformity with GAAP, those financial statements must include information about the company's operations in different industries, its foreign operations and export sales, and its major customers.

A firm that operates predominantly or exclusively in a single industry is not required to provide industry segment information, but it must identify the industry in which it operates. The factors that should be considered in identifying industry segments include: (1) the nature of the product, (2) the nature of the production process, and (3) markets and

marketing methods. Related products or service may have similar purposes or end uses, may share production or sales facilities or use the same or similar raw materials, or may have similar geographic marketing areas, types of customers or marketing methods.

A company is not required to provide financial information for all identified industry segments. Financial information is required only for those industry segments that meet the requirements of Statement No. 131 for classification as reportable segments.

Reportable segments are determined on the basis of the significance, or materiality of the industry segment to the company. An industry segment is reportable if it satisfies one or more of the following three materiality tests:

1. Revenue test
2. Operating profit or loss test
3. Identifiable asset test

To satisfy any of the tests mentioned above, the segment's share must be 10 per cent or more of all the firm's industry segments.

Segment Information to be reported

1. **Information about foreign operations and export sales:** These are revenue, operating profit or loss, and identifiable assets which are to be reported separately for each geographic area, whose sales to unaffiliated customers are 10 percent or more of consolidated sales revenue.
2. **Information about major customers:** A company is required to disclose information about the extent of reliance on major customers. If 10 per cent or more of the revenue of a company is derived from sales to any single customer, including a government body, that fact and the amount of revenue from each customer must be disclosed. In addition, the industry segments or segments that make the sales must be disclosed.
3. **Revenue Information:** Sales to unaffiliated customers and sales or transfers to other industry segments of the enterprise. These should be disclosed separately.
4. **Identifiable asset information:** The aggregate carrying amount of identifiable tangible and intangible segment assets plus an allocated portion of any assets used jointly with other industry segments should be disclosed.
5. **Profitability Information:** Operating profit or loss of each reportable segment.
6. **Other related disclosures:** The segment's aggregate amount of depreciation etc., capital expenditures, and other information is to be reported.

Thus, a company, which publishes annual financial statements in conformity with GAAP, must also provide information about operations in reportable industry segments, foreign operations and export sales, and major customers.

Methods of Presenting Segment Information

Information about the reportable segments shall be included in the company's financial statements in any of the following three ways:

1. Within the body of the financial statements with appropriate explanatory footnotes to the financial statements.
2. Entirely in the footnotes to the financial statements.
3. In a separate schedule that is included as an integral part of the financial statements.

Most companies in the United States report industry segment information in separate schedule included as part of the financial statements.

The International Accounting Standard Committee (IASC)

The IASC has issued IAS No. 14, "Reporting Financial Information by Segment" as a guideline to the member countries. The revenue, profitability and other information is recommended to be disclosed by (1) industry segment and (2) by geographical segment.

The ICAI has recently issued an ED on segment Reporting. See Appendix 11 for details.

Segment Disclosure in India

The Indian Companies Act 1956 has provision for disclosures of some segmental (product) information in published annual report such as sales (quantity and values), production (quantity and values), stocks (quantity and values), purchase (quantity and values). Besides, information about licensed capacity and installed capacity for every product is also to be given in the annual report. It has been found that many diversified Indian companies develop segment information for their managerial planning, control and decision-making such as income statement, sales or other group

revenue, cost of goods sold, gross margin on sales, segment contribution margin, selling expenses, administrative expenses, segment net profit before tax, segment balance sheet. It has also been found that 33% of diversified companies in India prepare income statement based on organizational divisions or geographical markets in addition to complete income statement for each product.

The disclosure of non-mandatory segmental information by Indian Companies in their annual reports has not been uniform. The segmental information has been mostly given in director's report and/or chairman's statement. Also, such segmental information are descriptive and not in income statement or balance sheet format.

SOCIAL REPORTING

There are many terms which are used for social performance information such as social audit social accounting, socio-economic accounting, social responsibility accounting, social reporting. These terms have been used interchangeably as they appear to be synonymous. Although the question of terminology is without much significance, its use should be characteristic appropriate and generally accepted conceptual framework. The term 'social audit' has been in much use but it is very clear that this is not an audit at all but a form of social report. The use of the term 'audit' without the connotation of independent attention creates some semantic tension. The term 'social accounting' has secured recognition as a customary usage in national social analysis and planning. The term 'social' reporting appears to be more appropriate than others.

Social reporting is a rational assessment of and reporting on some meaningful, definable domain of a business enterprise's activities that have social impact. This reporting aims at measuring (either in monetary or non-monetary units) adverse and beneficial effects of such activities both on the firms and/or those affected by the firm. Being concerned with the social, human and environmental constraints on organizational behaviour, it measures social costs and benefits. The social reporting information is communicated to social groups both within and outside the firm. Thus social reporting implies the measurement and reporting, internal or external, of information concerning the impact of a business enterprise and its activities on society.

Need

In recent years great interest has been displayed by scholars in various fields about corporate social performance. No doubt economic progress is the primary goal of business enterprises. But what constitutes economic progress is going under qualitative change. It has now become important for the companies to identify society's changing needs, to ascertain society's social priorities and to ascertain which business investments will yield economic return while satisfying these social priorities. The Trueblood Committee Report observes that "an objective of financial statements is to report on those activities of the enterprise affecting society which can be determined and described or measured and which are important to the role of the enterprise in its social environment."

- (i) **Management Uses:** Social responsibility information is useful both to corporate managements and external users. Corporate managements need social performance information to respond to a critical press, to ensure that the company is responsive to social challenges and that company policies are being followed. The company because of growing legal liability needs to know in some detail what sort of social programmes it is running and what results it is getting. Company managements also need complete information about the effects of business operations and policies on society: it is probably more important that they be fully informed as to negative effects, since this is where the criticism will be directed and this is where the directors may have to defend themselves in court.
- (ii) **External users:** The external demand for social information is even more diverse. Various segments of the company's public—investors, customer, government bodies, public interest groups, professional organisations—are seeking social information to judge the performance. There has been increase in the number of ethical investors who believe that they should avoid investing in those companies that are thought to be causing social injury or environmental damage of one type or another. Also, public concern had increased over the side effects of corporate activities resulting in new and increasingly stringent sanctions against certain types of corporate activities. The sanctions that have been applied increasingly to corporate activities which have been judged to be socially undesirable include legislative enactments, government regulation, judicial decisions and consumer retaliation. Clearly, when severe and costly sanctions are invoked, the expected economic impact on the affected company may be sufficient to induce a direct relationship between its social performance on certain key issues (e.g. pollution control) and the worth of its shares. Under these circumstances, it would not be surprising

to find knowledgeable investors, considering a company's social performance in making their investment decisions. The fact that an association exists between a company's social performance and its value as an investment is supported by much empirical evidence. According to Longstreth and Rosenbloom, adverse activities in any of the major (social) areas could conceivably have an effect upon the company's industry position, the acceptance of its shares in the market and thus and direct bearing on the investment merits of the company. Bowman says that corporate expenditures in the general area of externalities (side-effects) may benefit a company in the long run in a number of ways;

It may well have an effect on the price/earning ratio that is "assigned" to a company. In other words, the market's perception of corporate responsibilities may affect the price of the stock and, therefore, the investor's return (where both dividends as well as capital gains are considered as included in total return). In addition, to this direct effect, the price of stock will have subsequent effects on the cost of capital to the growing company and ultimately on its earnings.

Recently Spicer conducted a study to investigate the empirical validity of some investors' assertions of an association between the investment worth of a company's securities and its social performance. He concluded:

Larger companies..... tend to have the best pollution control records and that these companies, in general, were judged by investors to be less risky in terms of both total and systematic risk. In addition, these companies were awarded generally higher price – earnings ratios than companies with poorer pollution control records.... Such associations (better pollution – control and higher profitability, larger size, lower total risk, lower systematic risk and higher price/ earnings ratios) may be relatively short lived phenomena under circumstances where public pressure results in legislation which requires significant pollution abatement on the part of companies.

Social Disclosures in Annual Reports

A few attempts have been made especially abroad to measure and report on social performances in corporate annual reports. For instance, Elias and Epstein found that the following items were disclosed in the U.S. annual reports: environmental quality, equal employment opportunities, product safety, educational aid, charitable donations, industrial safety, employee benefits, various community programmes, responsibility to personnel. According to Report of the Committee on Accounting for Corporate Social Performance (U.S.A.) the number of U.S. companies making social responsibility disclosure has increased.

Trotman study revealed that Australian companies were disclosing social possibility information in the areas of environment, energy, human resources, products, community involvement.

In India, the Tate Iron and Steel Company performed the first social audit (the company has used the term audit) in 1980 ever undertaken by any company, public or private. The purpose of the TISCO audit was to examine and report whether, and to the extent to which the company had fulfilled its objectives regarding its social and moral responsibilities to shareholders, society and the local community. The report about the social audit performed by the company is very descriptive and not structured and accounting oriented. The TISCO report has basically reported those aspects which reflect most favourably on them. This does not provide a basis for comparability among business enterprises for social responsibility performances and disclosures.

Approaches to Social Reporting

How and in what format social reporting might be performed, is a challenging opportunity on its own. Sacher Committee Report Observes:

"As far as possible social report must be cast both in quantity and monetary terms. Though there may be some differences among the various bodies and institutes as to the exact manner in which the quantification and verification is to be done by the companies, there is no dispute about certain well – accepted areas and items, which directors must disclose as an additional information every year."

No format of social reporting has emerged finally yet. The companies have been following some methods of social disclosure. Some of the approaches can be listed as follow:

- (i) A first approach has been an attempt to quantify values contributed to society (or assets) and detriment to society for actions taken or not taken (liabilities) and arrays them in a fashion comparable to the typical financial balance – sheet. This is basically an accounting (cost/benefit analysis) approach and involves difficult and costly calculations. Act Associates, a consulting firm in the U.S.A. has prepared social income statement and a social balance sheet on this pattern.
- (ii) A second approach to the corporate social reporting involves the cataloguing and narrative description of what the company is doing in each area where it recognises that society expects it to do something. This approach may

be a massive description of the company's activities with little or no analysis of results or costs.

- (iii) A third approach may be described as the programme management approach. It focuses on measuring only those activities in which a particular company is involved largely for social reasons. This does not have a great potential for external reporting. But it can be used by company managements into its overall planning and budgetary process. The approach followed by TISCO in its social audit is oriented towards theoretical and is similar to programme management approach.
- (iv) A fourth approach to social reporting involves an attempt made by groups and individuals outside the business enterprise to determine which companies are responding well to social and environmental demands and which are acting in an irresponsible manner. The social audit performed by TISCO was done by a committee consisting of persons outside the entity.

The discussion of the above approaches indicated that there is a problem of measurement in corporate social reporting. The accounting system applied at present are not structured primarily to accumulate and communicate corporate social information. Whether the social report must actually be quantified and in what way social disclosures should be made are important questions which can be solved by mutual consultation among the interested parties such as the corporate sector, accounting and other professional organizations, users/user groups, and the government.

Audit of Social Report

There is indifference of opinion as to whether the corporate social report should be verified by an auditor. According to one opinion social report information be examined by an auditor because it will increase the credibility of information for the benefit of users. However, some feel that audit would result in a reduction of rhetoric. American Accounting Association's Committee on Social Costs (1974) is of the opinion (perhaps the most appropriate) that independent attestation to social reports appears unlikely, unless at some future time their use by external parties becomes widespread. Then attestation, based upon an independent review would add a desired degree of credibility.

Social Disclosure Practices in India

In India, the Companies Act 1956 deals with the preparation of balance sheet and profit and loss account. The Act requires the auditor to make report under Section 227 to members (shareholders) and express an opinion whether the company's balance sheet and profit and loss account exhibit true and fair view of the company's state of affairs. Although, this Act has been amended from time to time, no specific provision has been made requiring companies to provide social responsibility disclosures to their annual reports. The Government of India appointed a Committee under the chairmanship of Justice Rejoinder Sachar to consider and report on the changes that are necessary in the form and structure of the Act. The Committee (1978) recommended the inclusion of the following, inter alia, in the director's report:

"Steps taken by the company in various spheres with a view to discharging its social responsibilities towards different segments of the society, quantifying where possible and in monetary terms. The Board should also report on the future plans of the company towards the discharge of its social responsibilities and duties."

In 1981, The Institute of Chartered Accountants of India after making a survey found that 123 out of 202 companies provided some information in their directors reports about company contribution in social responsibility areas. The findings are summarized in Table 12.1.

Table 12.1
Social Responsibility Accounting

<i>Item</i>	<i>No. of Companies</i>
Employee welfare	47
Donation for social causes	28
Spreading education	14
Aid in national distress	12
Family planning and health	12
Employment growth	3
Workers participation in management	2
Pollution control	1

Sources: Research Committee of ICAI, Precedents in Published Accounts. The Institute of Chartered Accountants of India, 1981.

Some Indian companies have made attempts to provide information on their responsibility activities in published annual reports and/or through separate means of disclosure. Some companies prepare social income statements and social balance sheets and report them in their published annual reports.

INTERIM FINANCIAL REPORTING

Another type of useful information is interim financial information. Financial reporting and disclosure have been moving steadily towards a more prompt and continuous reporting information. In this Continuous Reporting Process (CRP) the quarterly financial report is considered to be an increasingly important means of enabling investors to evaluate enterprise performance. While the annual report provides an important benchmark that has the benefit of being independently audited, it is inherently less timely. Periodic reporting at quarterly, and sometimes monthly interim dates, provides users with more current information for use in assessing the performance of a business enterprise and perhaps revising their expectations concerning its prospects. The length of time that elapses between annual financial statements may be too long to permit a timely evaluation of a company's financial position and changes its financial position.

Financial reports issued between the dates of annual financial statements are called interim financial reports. "Interim financial reports (for a period less than one year) have the same evaluation and forecasting objectives as annual statements. But they are also used by the outside investors in forecasting the results that will be shown on the annual statements. The factors to be noted in interim statements are fluctuations in the intra-year flow of revenues costs and expenses. They may be studied under the background of seasonal, random, scheduled, cyclical and non-recurring factors."

Importance

Many security investment and credit decisions are made on the basis of information disclosed in corporate financial statements. These economic decisions are made throughout the year rather than at year-end reporting dates. The present accounting practice is oriented towards annual reporting. But the investors need making continuous evaluation of general economic industry, and company developments and making or revising projections or earnings and financial position as a basis for investment decisions. More frequent disclosure of adequate information on a time basis will be useful to the investor. No doubt the annual report will continue as a report on management's stewardship for the full year and a benchmark for measurement of financial progress over several years. But neither the dynamics of the internal organisation, nor outside economic forces stop and start over at each new accounting year. Therefore corporate reporting should continuously measure and report on the firm's progress and provide more than annual benchmarks and checkpoints.

Seidler and Benjes suggest that a tendency has developed to act on estimates of quarterly earnings, with substantial market price corrections frequently occurring when reported quarterly earnings vary from those anticipated. In the U.S.A. the Securities and Exchange Commission has given the following requirements for reporting interim results, effective with the first quarter of 1976.

- (i) An income account in the same detail as the annual report for the current period and year to date, as compared with the previous year.
- (ii) A full balance-sheet at the end of the current period and of a year ago.
- (iii) A funds statement for the year to date as compared with the same period a year ago.
- (iv) An adequate discussion of current developments in the business.
- (v) Explanation of unusual charges, changes in accounting method, retroactive adjustments during the year and purchases and poolings.
- (vi) Inclusion of selected quarterly income data in the notes to the annual financial statements, together with the auditor's limited review thereof.

Problems in Interim Reporting

The utility of interim information for investors is substantial, but the contents of quarterly reports to share holders are often inadequate. Also, some accounting problems are involved in interim reporting.

Matching Problem

Business operations are not similar and uniform throughout the year. Resources are acquired and output is done in advance

of sales. Some costs related to current sales do not mature into liabilities or readily measurable expenses until a subsequent time. Because of various lead and lag relationships between cost and sales, difficulties are created in matching costs and revenues. The relationship between costs and revenues becomes unclear.

Many techniques and procedures are available in cost accounting for allocating costs between different periods. But the allocation procedures appear to be highly arbitrary which raise serious questions as to the reliability and usefulness of the results. For example depreciation and property taxes may be allocated to months on a time basis. But deducting a constant amount from each period when sales fluctuate, tend to increase the amplitude of fluctuations in reported profits. Some expenses to be incurred during a year may be uncertain at the time when revenues are reported e.g. maintenance and repairs, employee vacations, various taxes etc.

Inventory Problem

In a business enterprises, inventory is a major element in the generation of income. Inventory problems in interim reporting have three types of problems: determination of inventory quantities, valuation of inventories and adjustments of valuation. The development of inventory data for interim reporting depends largely on the making of accurate physical counts and its costing procedure. However, the valuation problem is more important than the quantity problem. It is said that for business firms adopting LIFO, interim reports may be a problem if the inventory level at the end of the reporting period is below than that at the beginning of the year. In such situation interim periods are not independent of other reporting periods. Inventory valuations are further adjusted to lower-of-cost-of market value. The need to periodically consider cost recoverability is supported strongly by financial accounting practice.

Extent of Disclosure Problem

There is a problem of deciding the quantity of disclosure in interim reports. Generally speaking disclosure requirements applicable to annual reporting are not applicable to interim reporting. In the absence of mandated interim disclosure, the interim disclosure practices are likely to vary. There is a need to determine materiality criteria for deciding the information to be disclosed in interim reports. The treatment to be given in respect of prior period adjustments, extraordinary items and earning per share can create difficulties in interim reporting.

Improving Interim Reports:-

The primary purpose of interim reports is to help the users in prediction of results for the current year. Although interim reporting involves important accounting problems, its need and significance is now being felt by the investors and other users for making sound economic decisions. Edwards, Dominia and Hedges have proposed the following criteria and guidelines for interim reporting:

- (1) Timeliness should be emphasized in the reporting of information about interim period activities. Financial reports should be promptly distributed by publicly owned business firms to external users at least four times during each fiscal year, and usually following the end of each three month period.
- (2) Report on interim period activities should be designed to materially assist important individual user groups to achieve major objectives related to investment and credit decision.
- (3) Interim reports should incorporate data developed with an emphasis on forecastability. Unusual events, the effects of which are material in size, should be separately disclosed in interim reports. Materiality should be based on the results of interim period activities. The accounting for and reporting of similar events in interim statements should be consistent for a given entity over time.
- (4) Interim reports for general distribution should be directed toward meeting the needs of both current and prospective shareholders and important representatives of these groups.
- (5) Substantial disaggregation of data should be reflected in reports for interim periods. Disaggregation should emphasize disclose of information about the nature of the events which underlie the reported data.
- (6) Interim report should be designed so as to reduce the amplitude of those security exchange price fluctuations that result from misinformation. Misinformation is used here to include failure to communicate and partial communication.

Disclosure in Interim Financial Reports

The following minimum data is required by the APB Opinion No. 28 to be reported to security holders at interim dates of a publicly traded company:

1. Sales or gross revenues, provision for income taxes, extraordinary items (including related income tax effects), cumulative effect of a change in accounting principles and practices, and net income.

2. Primary and fully diluted earnings per share data for each period.
3. Seasonal revenue, costs and expenses.
4. Significant changes in estimates or provisions for income taxes.
5. Disposal of a segment of business and extraordinary, unusual, infrequently occurring items.
6. Contingent items.
7. Changes in accounting principles or estimates.
8. Significant changes in financial position.

The foregoing information with respect to the current quarter and the current year-to-date shall be furnished together with comparable data for the preceding year.

Interim financial reports should indicate any change in accounting principles or accounting estimates from those used in (1) the comparable interim period of the prior annual period, (2) the preceding interim period in the current annual period or (3) the prior annual report.

IMPROVING FINANCIAL REPORTING

Company financial reporting is useful to the corporate managements and investors, and leads to more efficient allocation of investment funds in an economy. Investors are interested in better financial reporting because it helps them to make sound economic decisions. The company benefits from fairer prices for its shares in the investment market, by building investor's confidence, getting more investor receptivity for its capital issues and enhancing its image as a responsible citizen in the society. Although much has been done by Indian companies to improve their financial reporting practices, additional progress can still be made. A considerable range in quality of corporate disclosure remains. Therefore, corporate managements should always attempt to bring their financial reports upto the standards of the best. It is also true that future financial reporting will tend to become more complex as it will try to reflect the character of a business enterprise in a changing environment. The following suggestions are made to improve the company financial reporting:

- (1) Company financial reporting should highlight developments taking place in economy, government policy and other areas and inform the investors about them. Company may give its own views on these matters. When these developments have significant impact on earnings potential and financial position, information about them becomes relevant for the investors to judge the effects of these events on returns and risk involved in investments.
- (2) Social responsibility information should be provided as they are useful in evaluating accountability of a business firm towards the different segments of a society. A business enterprise is accountable not only to existing shareholders but also to other users of financial reports for its actions and non-actions in changing environment. Social responsibility information has been empirically found useful to the investors in making investment decisions.
- (3) Investment decisions are made by the investors throughout the year and not necessarily at the end of year when a company annual report is released. Therefore, investors require adequate information on a regular basis. In this regard, it is suggested that some interim information (say quarterly or half yearly) should be provided to the investors. The extent of interim information is a difficult problem and opinions vary as to how much information should be given in interim reports. This is an area where the company, the accounting profession, and the users have to decide the mutual understanding among themselves. However, interim reports need not to be compulsorily audited and also should be released as promptly as possible.
- (4) 'Forecasts Information' should be given as the investor's problem is to project future earning power which cannot be done on the basis of historical data alone. There should be adequate disclosure regarding capital expenditure, new product developments, financing etc. Besides, company can provide forecast of sales and earnings mentioning the assumptions and facts upon which the forecast is made. Forecasts information should be given on a voluntary basis. But in case forecasts are made, they should be given to all shareholders in the interest of fairness in financial reporting.
- (5) Cash flow data also is primary importance to the investor and other external users as it highlights the liquidity and real financial position of business firms. Most external users are interested in amount, timing, certainty (or uncertainty) of cash flows in making investment decisions. Therefore, in order to make better evaluation and prediction of company performance and position, cash flow data is also needed along with conventional financial statements. The above suggestions for improving the financial reporting are not new. Some of them appear in some companies' annual reports. Also, these suggestions are not detailed, comprehensive and final. External users' objectives

and informational needs are likely to vary over time and financial reporting in its objective of serving the external users should adapt to changing environment. Further, financial reporting is not meant for existing shareholders alone. Therefore, the usefulness and relevance of financial reporting have to be judged in terms of broader classes of users-beyond the needs of existing shareholders.

- (6) The director's report has a great opportunity for improvement. It should be more informative and analytical as it has a great bearing on the creditability of the annual report as a whole. The directors' report should highlight significant events, their causes, results, and implications for the future. It should avoid promotional comments, be objective and frank in exposition. Financial summary or results which are given in directors' report should be improved by making it more analytical and useful. Changes in earning or operating results should be explained in terms of volume, price, market share, raw materials costs, and other related important factors.
- (7) Financial reporting should incorporate information reflecting the effects of inflation on the business-profitability and financial condition. Although no single inflation accounting model has got world-wide acceptance, management should select a method, explaining it to the investor, its significance relative to the realities of the business and its possible application in managerial decisions and investors decisions.
- (8) Human resource accounting information has a great potential not only for the management in areas of planning, control, performance evaluation, profit measurement, and decision-making but equally beneficial to investors in investment valuation. The human resource accounting information will improve the utility of financial reports for external users.
- (9) Additional operating data and ratios would improve the company financial reporting. At present, Indian companies are providing useful operating statistics and ratios. However, the company should decide relative importance of these operating statistics and data found highly useful to the investors should be disclosed. Operating data, as supplemental information, enhance the utility of overall company annual report. Moreover, these data can be used to compare the performance of a business firm with other firms operating in the country. The nature of the business, and operating activities carried on determine what type of operating data could be reported. Some examples of such operating data are sales, production selling prices, raw material prices, utilization of profit, employment figures, information about products, etc.
- (10) A statement on company objectives and broad strategies is desirable to help the external users in making forecasting of future earning power. Objectives help investors to know the business and management and to build better understanding.
- (11) Financial reports need to be simplified through better organisation and presentation of data. In future there is likely to be further extension in financial reporting information because of external users' increasing demand for greater disclosure. Moreover, external users' characteristics are likely to be of diverse and complex nature. In such a situation, financial reporting needs to be readable, simple, factual, well organized, suitably presented, and free from bias, to meet all users' requirements.
- (12) Segment information should be provided in case of diversified companies to help the investors in making better assessment of earning potential and financial position of the business firms as a whole. Consolidated information is useful, but less useful as compared to segmental information. Furthermore, information on foreign operations such as sales, Operating expenses, net income, balance sheet items should be given besides the expenses information on export sales. Financial reporting used for foreign operations should explain properly the accounting for foreign currency translation and also how foreign operations are affected by currency changes. The gain or loss on foreign currency translation must be clearly reported in the income statement.

Backer has given the following suggestions to enhance the usefulness of interim financial reports:

- (1) Allocating annual costs to interim periods on the basis of sales – Reported profit tends to vary with sales when annual costs are allocated to interim periods on the basis of the period's portion of total annual sales. To have interim period costs and profits vary with sales in advantageous to investors who are seeking to forecast annual profits because forecasts sales can then more easily be translated into forecasts of profits. However, maximum benefits will result only where annual costs of both manufacturing and non-manufacturing functions are allocated to periods on the basis of sales.
- (2) Adopting fiscal period to operating cycle – Accounting problems resulting from arbitrary cut-offs can be minimized by selecting a close date which coincides with a time of low activity in a company's natural

operating cycle. Businesses which experience more than one distinct seasonal cycle within a year could improve the significance of quarterly statements by reporting for seasonal cycles rather than for calendar years. Reports for periods containing a uniform number of working days rather than for calendar months, and prorating costs on the basis of working days instead of months help to remove some erratic fluctuations in monthly and quarterly operating results.

- (3) Disclosure to aid interpretations where material amounts of unusual items have been accrued or deferred in accounting for interim income, disclosure of the procedures followed may help the users to interpret the results. Since investment decisions are based on future expectation rather than past performance, a view of the management's expectations by interim periods would seem to be helpful.
- (4) Smoothing income to minimize fluctuations- Accounting techniques for smoothing interim income include accrual of anticipate expenses which related to the whole year rather than reporting them when they arise. For example, provision for bad debts may be accrued monthly rather than only at the end of the year.

Interim Reporting in the United States

In an effort to reduce the variety of approaches to interim reporting, to minimize the inconsistencies caused by the difficulties inherent in interim reporting, and to focus attention on only one view of interim reporting, the APB issued Opinion No. 28 (1973) which stated that each interim period should be considered an integral part (second view) of the annual period. Many of the concepts used for annual reporting. The Board felt that the results for each interim period should be based on the accounting principles and practices used by an enterprise in the preparation of its latest annual financial statements, unless a change in an accounting practice or policy has been adopted in the current year. However, certain accounting principles and practices followed for annual reporting practices do require modification at interim reporting dates so that the reported results for the interim period would better relate to the results of operations for the annual period and thus would be more useful.

The Generally Accepted Accounting Principles (GAAP) for interim reporting, as prescribed by Opinion No. 28 of the ABP and amended by the FASB's SFAS Nos. 3 (1974) and 18 (1977) are given below in brief:

Revenue for interim: Revenue from products sold or services rendered should be recognised periods on the same basis that is used for the annual period.

Expenses: Expenses that can be associated directly with or allocated to products sold or services rendered should be matched against interim revenue on the same basis or bases as those used for annual reporting purposes, for example, costs of materials used, wages and salaries, manufacturing overheads.

Companies should generally use the same cost flow assumptions (e.g., FIFO, LIFO, average cost) for interim reporting as those used for annual reporting in determining inventory costs and cost of goods sold. Some exceptions, however, are appropriate for interim reporting purposes.

Interim Reporting in India

The C.B. Bhawe Committee (set up by the SEBI) made recommendations for quarterly disclosure of financial results for companies worth Rs.100 crore or more as shareholder funds. Consequent upon the recommendations, Clause 41 of the Listing Agreement between companies and stock exchanges was further amended. Under the amended clause of the Listing Agreement, all the listed companies will have to:

1. Furnish unaudited financial results on quarterly basis in a pre-set form within one month of the expiry of the period to the stock exchange where the company is listed.
2. Advertise the financial results with 48 hours of the conclusion of the board meeting at least in one English national daily and in the newspaper published in the language of the region where the registered office of the company is situated.

It has been made mandatory for companies listed on the stock exchange to comply with the interim reporting requirements specified in the Listing Agreement.

The present proforma requires the company to give:

- Financial details for the quarter ended, the corresponding quarter in the previous year, and the details of the previous accounting year.
- The accounts as above will have to be signed by the Managing Director.
- The company will have to hold a Board meeting and advertise its date at least 15 days in advance
- The quarterly accounts shall be prepared on the basis of the accrual accounting policy.

- Any information relating to material changes in the company's performance must be disclosed separately.
- Information like completion of expansion or diversification plans, labour troubles, changes in management, conversion of debentures into shares of any other material development, if it has occurred within the quarter.

Pre-set Form

Unaudited Financial Results (Provisional) for the Quarter Ended 200X

	Quarter Ended ...200X	Correspondence Quarter in the Previous year	Previous accounting year
Nets Sales			
Other income			
Total Expenditure			
Interest			
Gross Profit after			
Interest but before			
Depreciation and			
Taxation			
Depreciation			
Provision for Taxation			
Net Profit			
Paid-up Equity Share Capital			
Reserves (excluding Revaluation Reserves)			

Place
Date

By Order of the Board
For Ltd
.....
Managing Director

It is expected, the quarterly publication of financial results by a listed company will lead to greater transparency and provide better investor protection.

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1. Beaver, W.A. Financial Reporting, An Accounting Revolution, Englewood Cliffs, N.J. Prentice hall, 1981,p. 142.
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3. Shillinglaw, G Concepts Underlying interim Financial Statements, Accounting Review, April 1961, pp.222-31.
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CHAPTER-13

HARMONIZATION OF FINANCIAL REPORTING

Meaning of Harmonisation – As international trade and investment multiplies, accounting's international dimension broadens. Due to growth in trade across national frontiers, international financial reporting has become more important as the tool of communication among traders, entrepreneurs, financiers, and investors. At the same time, variations are evolving in accounting principles, audit practices, financial statement presentations, and professional standards. If accounting reports are to become a universal means of communication, action must be taken to harmonise the worldwide efforts to meet the international users' needs.

Harmonisation simply means maintaining uniformity in financial accounting standards and practices at the international level. It implies international harmony in transactional financial reporting to investors. It emphasizes to narrow the areas of difference and to eliminate undesirable alternative practices in financial reporting. Uniformity expedites the training of accounting practitioners, increases the reliability of accounting reports and tends toward a rational development of accounting theory. Flexibility, the opposite of uniformity, allows better adaptability of accounting methods in each firm, each industry, or each type of transaction. Besides, the absence of a single method provides scope for further experimentation. New and better theories may result. Nevertheless the pressure toward uniformity is overwhelming.

STANDARDISATION AND HARMONISATION

Standardisation involves

- (i) more uniform application of accounting concepts, principles and rules, reporting procedures and legislation;
- (ii) adherence to more unified charts of accounts and statements, which specify the classification categories by economic units, industries and sectors, and which preferably are applicable on an international scale; and
- (iii) greater systematization of all accounting activities, particularly standardized plans of accounts (this would not only include the classification charts but also the quantitative and qualitative aspects of data).

Thus, the term 'harmonisation' is not the same thing as 'standardisation'. Nobes distinguishes these two terms clearly: Harmonisation is a process of increasing the compatibility of accounting practices by setting bounds to their degree of variation. 'Standardisation' appears to imply the imposition of a more rigid and narrow set of rules. However, within accounting, these two words have almost become technical terms, and cannot rely upon the normal difference in their meanings.

Arguments for Harmonisation

There are strong pressures in favour of greater international harmonisation, and virtually all of the countries in the world now support International Accounting Standards Committee (IASC) efforts to develop a set of international accounting standards. The fact that so many different international organisations are now engaged in international standardisation, is a clear evidence that the need for such harmonisation has become widely recognised. F.M. Richard, president of the Ninth International Congress of Accounts held at Paris in 1976 remarked:

"Almost all the international and national authors are in favour of the harmonisation of accounting and auditing principles, and some even considered that this harmonisation is essential and really urgent."

There are many interest group (beneficiaries) such as investors, multinational companies, large international accounting firms, regional economic group, and developing countries who would benefit from harmonisation and who have contributed towards harmonisation.

- (1) **Developing Countries:** There is an argument that countries that do not have any domestic accounting standards would benefit from international standards in that it would enable them to adopt a readymade system. They would not have to produce their own, they could adopt (perhaps with some slight modification) the international standards. If this were possible it would be course save them a great deal of time and expense. Many developing nations do take a great interest in international standards. Nigeria, for example, one of the developing countries who are members of IASC have adopted these standards, and companies over a certain size are required to produce accounts that conform to such standards.
- (2) **Multinational Companies:** A major force in the movement toward international harmonisation has been the

economic self-interest of multinational companies. Multinational firms are the preparers of financial information. With diversity in accounting standards from country to country, these firms face a myriad of accounting requirements from the countries in which they operate. The burden of this financial reporting would be lessened with increased harmonisation which would simplify the process of preparing individual and group financial statements.

Multinational companies would benefit from harmonisation on the following counts.

- (a) Consolidation of overseas subsidiaries would be easier due to harmonisation as financial statements from all round the world would be prepared on the same basis.
 - (b) Many large companies want to raise money in more than one country and in international markets, and so need to produce accounts which can easily be understood by investors in many countries. For this reason the World Federation of Stock Exchanges is said to be encouraging the acceptance of international accounting standards.
 - (c) The task of preparing comparable internal information for the appraisal of the performance of subsidiaries in different countries would be made much easier. Many aspects of investment appraisal, performance evaluation and other decision-making uses of management accounting information would benefit from standardisation. Management control would be more easily accomplished. The appraisal of foreign countries for potential takeovers would also be greatly facilitated. Multinational companies would also find it easier to transfer accounting staff from one country to another.
- (3) **Investors:** A strong case for increased harmonisation can be made from the viewpoint of the users of accounting and financial information, mainly the investors who wish to invest outside their own country, that is, both transnational companies investing directly and individual investors wishing to invest part of portfolio of funds. If comparability of accounting standards helps economic decision-making and the efficient allocation of economic resources within a nation, the same can be said about economic decision-making and economic resource allocation on a world-wide bases. Without world-wide accounting and auditing standards, it is difficult, if not impossible, to assess the relative merits of alternative investment opportunities, or to make valid comparisons of the financial performance of companies in different countries.

Harmonisation, thus, could lead to improvements in the allocation of financial resources. It would help to avoid confusion and possible misallocation of resources by bringing uniformity in accounting standards and practices. Cummings and Chetkovich comment that "it is obvious that there is a need to harmonise accounting and reporting standards." They recognise that it "may not always be possible to achieve universal acceptance of a single method of accounting and reporting... the fact is that the promulgation of an international standard reduces the alternatives available under varying circumstances and that the required disclosures facilitate understanding and comparison."

Although international harmonisation would make financial statements easier, with not so many adjustments being required, it has also been argued that international investment and business has and still does go on without standardisation, and harmonisation. It has, in fact, not been found that the variety of systems really act as a restraint on international investment and international business.

- (4) **International Auditing Firms:** Another major force in the movement toward international harmonisation was the economic self interest international auditing firms have in such standards, so that they can sell their services as experts in many different parts of the world. McComb points out that "the thrust of the movement toward the harmonisation of accounting standards on the international level has come mainly from accountants in public practice rather than academic accountants." It would make life very much easier for them if similar practices existed throughout the world. Many auditing firms have clients (in the form of subsidiary or branch) operating in foreign countries. The preparation, consolidation and auditing of these companies' financial statements would become less onerous if accounting practices were standardized. The international auditing firms would also to quote international accounting standards to clients, to give them backing for recommending certain ways of reporting.
- (5) **Growth in International Business:** The main stimuli for harmonisation comes from the enormous expansion that has taken place in world trade and in international investment since the end of World War II. As international business and investment multiples, accounting's international dimension broadens, international financial reporting has become more important as the tool of communication among businessmen, entrepreneurs, financiers and investors. At the same time, variations are evolving in accounting principles, audit practices, financial

statement presentations, and professional standard. If accounting reports are to become a universal means of communication, action must be taken to harmonise world-wide efforts to meet the international users' need. John C. Burton at 1980 Proceedings or Arthur Young Professors Round Table on "The International World of Accounting & Challenges and Opportunities" remarked:

"... today, as more business is done internationally, as more capital crosses borders, as more investors seek investment opportunities in other countries, as more managements of international business attempt to better understand performance of foreign subsidiaries, the problem of diverse accounting standards becomes more acute. ... There is also the argument for a common need to communicate — a common language problem that suggests that it is useful if we talk in the same terms. The world is too small today to have national boundaries create many bases for totally different principles of economic environment."

Robert L. May: President of International Federation of Accountants, in his recent speech (1986) delivered at Australian Accountants Centenary Congress, Sydney, observes:

"There is a greater need than ever before for comparability of international financial data. Government, lenders, businesses, shareholders everywhere — they all need information in a form that is reliable, that is understandable, and that will encourage the flow of international investing rather inhibit it. In a world where finance and trade are international, it seems utterly incongruous that the accounting standards are not. In a world where the word 'multinational' is almost cliché, it seems strange that it has had so little application to accounting. In a world where national economies are so linked together that a crisis in one can send shock waves rolling into every corner of the universe, it seems entirely against logic that accountancy professionals must heed the out-of-date doctrines of separatism."

- (6) **Other Interest Groups:** One group who it is said would benefit from a greater degree of harmonisation would be tax authorities. They would find their work less complicated when dealing with foreign income. It must be said, however, that it is taxation rules that are responsible for many of the differences that do exist in accounting practices. Tax is and will remain a national matter. Accounting measurement may be harmonised, but it would need to be recognised that standardized accounting practices may need to be adjusted for national tax purposes.

At the Twelfth International Congress of Accountants in Mexico City in October 1982, John N. Turner, former Minister of Finance, Minister of Justice and Attorney-General of Canada, and first Chairman of the Interim Committee of the International Monetary Fund, cited these advantages of 'universally applicable standards.'

The greatest benefit that would flow from harmonisation would be the comparability of international financial information. Such comparability would eliminate the current misunderstanding about the reliability of 'foreign' financial statements and would remove one of the most important impediments to the flow of international investment....

A second advantage of harmonisation would be the time and money saved that is currently spent to consolidate divergent financial information when more than one set of report is required to comply with different national laws or practices....

A third improvement from harmonisation would be the tendency for accounting standards throughout the world to be raised to the highest possible level and to be consistent with local economic, legal and social conditions.

Need for Harmonisation

Current trends in the international accounting point towards a need for uniformity in accounting and reporting standards. The trends towards uniformity are stimulated by a desire for comparability in the worldwide investment community. At the 1980 Proceedings of the Arthur Young Professor' Round Table on the "International World of Accounting, challenges and Opportunities," the harmonisation in international accounting standards was emphasised.

Over the time, each nation of the world has developed its own rules of accounting and auditing, sufficient to the needs of its own commerce and maturity of its industry. And while the basic accounting techniques spring from the same basic body of accounting knowledge, principles and techniques have tended to develop differently in each country. Today, the principles and practice that guide the accounting profession in one country are sharply divergent from those in another. The principles that guide the valuation of assets allocation, foreign currency translation and accounting for changing prices may, in fact, be do different from one country to the next as to defy comparability and frequently, credibility as well. The result is that a businessman in one country attempting to understand the financial statements of a business in another country, may be at a serious loss to understand or use information vital to his needs.

Today, as more business is done internationally, as more capital crosses borders, as more investors seek investment opportunities in other countries, as more managers of international business attempt to better understand performance of foreign subsidiaries, the problem of diverse accounting standards becomes more acute.

There is also the argument for a common need to communicate, a common language problem – that suggests that it is useful if we talk in the same terms. The world is too small today to have national boundaries and create may bases for totally different principles of economic measurement.

John Buckley suggested that a major force in the movement toward international standards was the economic self interest international accounting firms and multinational corporations have in such standards, so that they can sell their services as experts or so that they can have administrative convenience in operating in many different parts of the world.

IASC and Harmonisation

To date, the IASC appears to be the most influential body involved in the standardisation and harmonisation programmes. International Accounting Standards (IASs), according to IASC, are in the best interest of the users and prepares of financial statements. Prudent investment and managerial decisions in this increasingly complex and internationally oriented world require such standards. Generally accepted International Accounting Standards mean that investors, bankers, creditors, managers, employees, and governments have less difficulty in understanding and analysing annual and interim reports prepared in countries other than their own, and that they can have confidence in those reports.

The IASC agreement provides that the professional accountancy bodies (who are members of IASC) agree to support the standard promulgated by the committee and to use their best endeavours:

- (1) To ensure that published financial statements comply with these standards or that there is disclosure of the extent which they do not and to persuade governments, authorities controlling securities markets and the industrial and business community that published financial statements should comply with these standards.
- (2) To ensure (a) that the auditors satisfy themselves the financial statements comply with these standards or, if the financial statements do not comply with these standards, that the fact of non-compliance is disclosed in the financial statements, (b) that in the event of non-disclosure reference to non-compliance is made in the audit report.
- (3) To ensure that, as soon as possible, appropriate action is taken in respect of auditors whose audit reports do not meet the requirements of (2) above

The IASC has made substantial progress in setting accounting standards and has tried its best to influence the member accountancy bodies for adoption of international accounting standards. The General Electric Company is the first major US Corporation to disclose that its financial statements are in conformity with International Accounting Standards.

Table 13.1
International Accounting Standards (IASs)

	Standards	Date of Issue
IAS 1	Disclosure of Accounting Policies	January 1975
IAS 2	Valuation and Presentation of inventories in the Context of the Historical Cost System	October 1975
IAS 3	Consolidated Financial Statements	June 1976
IAS 4	Depreciation Accounting	October 1976
IAS 5	Information to be disclosed in Financial Statements	October 1976
IAS 6	Accounting Response to Changing Prices	June 1977
IAS 7	Statement of Changes in Financial Position	October 1977
IAS 8	Unusual and Prior Period Items and Changes in Accounting Policies	February 1978
IAS 9	Accounting for Research and Development Activities	July 1978
IAS 10	Contingencies and Events Occurring After the Balance Sheet Date	October 1978
IAS 11	Accounting for Constructive Contracts	March 1979
IAS 12	Accounting for Taxes on Income	July 1979

IAS 13	Presenting of Current Assets and Current Liabilities	November 1979
IAS 14	Reporting Financial Information by Segment	August 1981
IAS 15	Information Reflecting the Effects of Changing Prices	November 1981
IAS 16	Accounting for Property, Plant and Equipment	March 1982
IAS 17	Accounting of Lease	September 1982
IAS 18	Revenue Recognition	December 1982
IAS 19	Accounting for Retirement Benefits in the Financial Statement	January 1983
IAS 20	Accounting for Government Grant and Disclosure Of Government Assistant	April 1983
IAS 21	Accounting for the Effects of Changes in Foreign Exchange Rates	July 1983
IAS 22	Accounting for Business Combinations	November 1983
IAS 23	Capitilisation of Borrowing Costs	March 1984
IAS 24	Related Party Disclosure	July 1984
IAS 25	Accounting for Investment	March 1986
IAS 26	Accounting and Reporting by Retirement Benefits Plans	January 1987
IAS 27	Consolidated Financial Statements and Accounting For Investments in Subsidiaries	April 1989
IAS 28	Accounting for Investments in Associates	April 1989
IAS 29	Financial Reporting in Hyperinflationary Economics	April 1989
IAS 30	Disclosure in Financial Statements by Banks and Similar Financial Institutions	August 1990
IAS 31	Financial Reporting Interest in Joint Ventures	

Recently, the Dutch government has agreed to recognise International Accounting Standards. Consolidated financial statements prepared in conformity with International Accounting Standards will be recognised by the Dutch government as equivalent to those prepared in accordance with the European Community Seventh Directive. Similarly, although the Financial Accounting Standards Board is not a member of IASC, United States accounting standards are in substantial conformity. The IASC's accounting standards has also influenced greatly the standard-setting activities in India. The Institute of Chartered Accountants of India gives due consideration before formulating their own standards. Some countries, such as Malaysia and Nigeria, who have no standards-setting resource of themselves, adopt all International Accounting Standards, lock stock and barrel, as national once. In UK, the national standards-setting body carefully studies every exposure draft and sends its comments. And subsequently they try to incorporate, to the extent possible, the contents of International Accounting Standards into their national standards.

In still other countries, where the government has a dominant influence on company reporting, such as France and Japan, there is a growing awareness on the part of government officials, that national requirements are less than perfect, and are due for revision. There is an awareness that it is beneficial to the international flow of capital, and in that way to the national economy, that companies should be permitted to report in compliance with world-wide requirements. International Accounting Standard, therefore, are Studied and their inclusion in national regulations is contemplated. Of course, this process will take time, but slowly the message of adopting international standards will have speedy effect on national standards.

Despite the substantial progress made by IASC in standards-setting tasks, much remained to be done. The 'best endeavours' mentioned in IASC agreement have not produced uniformly good results in establishing generally accepted international standards. In order to strengthen IASC in its harmonisation task, Stamps advises:

... in order to improve the creditability of the international standardisation programme the IASC should resolve that all national bodies affiliated to it should be required to make an annual report to the IASC giving full details of the degree of compliance within their country with international standards. The report should provide details of infractions of international standards by specific companies, naming the companies concerned, and the national body should provide

the IASC with details of the communications that it has had with the companies and with their auditors to ensure that infractions do not recur in the future.

Obstacles in Harmonisation

Many difficulties have been faced in the harmonisation programme commenced by international agencies, especially by IASC. These difficulties may be grouped as follows:

- (A) Difficulties in the Development of Standards
- (B) Difficulties in Enforcement of Standards
- (C) Other Difficulties

Difficulties in the Development of Standards

The main difficulties in establishment of an internationally uniform system of accounts and the standardisation of accounting are the following:

- (1) **Gaps between Developed and Developing Countries:** *It many areas developing countries differ from those of developed. In fact most developing countries had little chance to evolve accounting systems which truly reflected the needs and circumstances of their own societies. Their existing systems are largely extensions of those in developed countries. In this situation, the benefits of their being more deeply integrated into systems that predominantly suit developed countries become questionable. Briston comments that instead of recognising the inadequacies of the UK and US system and attempting to make it more relevant and integrated, UK and US accountants are gradually imposing that outmoded system upon developing countries. On the contrary, developing countries must create their own systems before this adverse influence has reached an irreversible stage. Briston has studied the spread of western accounting ideas throughout the world. British influence is very longstanding in many old colonial countries. He points out that once a reporting system and nucleus of an accounting profession has been established, it becomes very difficult to modify the system. The result is that these countries have adopted accounting principles and systems which originally evolved to meet the needs of UK capitalise. Enthoven points out that we must not assume that what might be good accounting for the developed countries "will automatically be economically relevant and good for the emerging nations and process of development." Samuels and Oliga argue that differences between countries can be so great that the problem of appropriate accounting standards can assume vastly different conceptual meanings and contextual significance from one country to another. Bailey makes a similar point and says that there may not be an accounting model universally applicable in all countries.*

Critics of harmonisation in the developing nations also argue that these (developing) countries have few indigenous private investors. Economic activity is, to a considerable extent, in the hands of government agencies, and financial information should be geared primarily to their needs rather than to the needs of private investors. When it is said that financial reporting should be useful to investors, this goal is primarily oriented towards indigenous investors.

- (2) **Provincialism:** Many countries hold provincial outlook in many spheres. As long as people believe that their own views are superior to those of others, known or unknown, it is hardly possible to reach agreement on a common solution. Although this provincialism is found absent among the (AISC) Board members, it is present very often in their countries. *This provincialism is found greatly in developed countries, or countries where accounting is most developed. Such countries are reluctant to change their views and listen to others. Arpan and Redebagh believe that "nationalism, egoism and pride also impede progress: the French would like to have the new global system patterned after the French System... the American, the American. Each country believes its system is the best and is reluctant to adopt a system it perceives to be inferior or unsuitable."*
- (3) **Diverse Accounting Practices:** Another difficulty is that at the present time, there are wide divergences in world-wide accounting practices. Each practice may have its own justification and will be understood in the national environment. Obviously, it is the task of IASC to try and narrow these areas of divergence. However, variations in accounting practices hampers harmonisation. IASC is operating in an environment of conflict between ideals and practicality. The IASC has, first to outlaw practices that are clearly misleading or allow management too much latitude; and then should try to eliminate options that do not contribute to fairness and usefulness in financial reporting.
- (4) **Difference in Economic and Social Environment:** Harmonisation is adversely affected by the differences in economic and social environment, in which accounting has a role to play. In different countries, there

is a different view on what is, or should be, the primary purpose of financial statements. In some countries, and the US is one of them, the investor and his decisions are considered to be most important. In others, such as Germany, it is believed companies have a public accountability to a great variety of interest groups. These differences in purposes which are in the mind of accountants lead to different views on what is appropriate accounting treatment. Some operate from an environment of extreme conservatism, others from an environment that borders on creative accounting.

Fantl argues that "one of the chief and least recognised misconceptions which occurred in international accounting is the assumption that accounting objectives are uniform. "Fantl meant that if we are going to achieve harmonisation, we can only do so when all countries have the same objectives from their accounting systems. It is only if accounting objectives are compatible with one another that there is any real prospect of arriving at meaningful common standards. As McComb points out, "if any two national accounting models are irreconcilable, then either one or both must be fundamentally changed if common standards are assumed to be a primary goal." Chetkovich states "it would make sense that we seek to define international accounting objectives before we attempt to define international accounting standards. Common objectives must necessarily derive from social and economic environments that are similar and thus create similar needs."

Difficulties in Enforcement of Standards

After establishment of international standards, difficulties may emerge at enforcement level. These obstacles have to be overcome in order to achieve adoption of and compliance with International Accounting Standards. Such difficulties are listed follows:

- (1) **Disclosure Laws:** Another difficulty is, again, the law — not the tax law but laws regulating financial reports to shareholders and the public. In some countries, this law provides great details both on disclosure and on measurement. In this environment, the notion of 'true and fair reporting' loses importance and the primary purpose of preparers and auditors comes to comply with law and regulations. For IASC, this situation means that in such a country International Accounting Standards will not be adopted unless they are incorporated in the disclosure laws. This requires changing the relevant law which is itself a tiresome and time-consuming task. In most countries law-makers are not leaping to their feet to do this job because company reporting is not a hot political issues. And if it is, even worse, because then politicians will handle the issue with strong political overtones.
- (2) **Competition among International Standards-Setting Agencies:** There is found a potential competition between international standards-setters. As it is clear, apart from IASC, the UN and OECD are now engaged in the field of company reporting, especially by multinational enterprises, OECD has made now engaged in the field of company reporting, especially by multinational enterprises. OECD has made it clear that it does not want to go into setting standards, but wishes to restrict itself to clarifying the guidelines for disclosure of information, and to energizing in some way or other, the process of international harmonisation. In the UN, on the other hand, it is quite clear that a number of countries wish the UN to develop and issue enforceable standards for reporting by multinationals. In such situations, there is a serious anger of incompatible and conflicting sets of international standards. It is also rightly said that the UN exercise has strong political overtones.
- (3) **Tax Laws:** Harmonisation faces problems due to differing tax laws. In many countries of the world, enterprises are required to draw up one set of financial statements only serving both tax purposes and financial reporting purposes. Government has an overriding interest in profit as computed for fiscal purposes; tax laws often prescribe in detail how profit should be measured. In this framework it is unavoidable that business is more concerned about tax saving than it is about accurate determination and reporting of financial performance. And equally unavoidable is the consequence that International Accounting Standards are judged primarily by these tax implications, the government opposing standards that would reduce profits and business opposing standards that would boost profits. Due to these reasons local standards and international standards differ and, where they differ, local standards prevail and international standards tend to be ignored. Clearly, we cannot hope for improvement and harmonisation of financial statements unless all ties between tax accounting and reporting to the public are cut completely. This would be the single most important contribution that governments are able to provide to the cause of international harmonisation.
- (4) **Existence of Local Standards:** Difficulties may evolve from the activities of the national standards-setting bodies. In more and more countries, accounting standards have been found established by the profession or

government agencies or jointly by both. Seen on the national level, this may have merits. But seen from an international viewpoint, problems arise. If many countries have detailed rules on many subjects, there is bound to arise conflict between these national systems. This is unfortunate for international enterprises who address their reports to users both at home and abroad, and it reduces the credibility of their statements abroad.

At the same time, once there are national standards, it appears to be rather difficult to adopt them to international consensus. As soon as there is a national standard, national position become entrenched, and it is hard to exchange that position for one that is considered second rate. Apart from that, national standards-setters have to weigh carefully the feelings and environment prevailing in their own countries. That meant that often standards-setters are unable to compromise even if they would wish to do so.

- (5) **Unhelpful Corporate Attitudes:** Standards are basically meant for business enterprises. They are expected to comply with International Accounting Standards, and if they do not, they are an obstacle in getting compliance. Amongst the enterprises that are reluctant to formally adopt International Accounting Standards, two broad categories can be made.
- (a) Those whose affairs are purely domestic, and that hold the view that international harmonisation, but are hesitant to back IASC as long as they are not sure IASC is a winning horse.
 - (b) Those whose affairs are international, that recognise there is a need for international harmonisation, but are hesitant to back IASC as long as they are not sure IASC is a winning horse.

On the other hand, it should be noted that many companies do comply with International Accounting Standards for the simple reason that these do not require anything that is not already in their national standards.

Other Difficulties

There are many other difficulties which hinder the efforts towards international harmonisation. These difficulties primarily relate to international standards-setting agencies. The International Accounting Standards Committee and International Federation of Accountants both have critics as standards-setting agencies. According to world Accounting Report (December 1982):

"The IFA is being seen by any as an organisation heavily influenced — some would say even manipulated — by the North American profession. There that IFAC's appearance is increasingly viewed by Europeans and other accountants as tainted with American bias."

Daley and Muellers has analysed country representation on international standards-setting bodies. Of the countries who are represented on at least three of the bodies, seven are western developed nations, only one is from Africa, and none is from the Middle East. They point out that because of the 'western bias' of the IASC many of the developing nations criticize its work for 'being insensitive to their situation and needs.' Daley and Mueller conclude that if private sector standards-setting is to continue as at present, with no enforcement powers, then it must become more internationally oriented. That is, more nations must be represented on the international committees than at present; it is then more likely that statements will be acceptable.

Mueller gives three major reasons why the IASC may be viewed as an ineffective and inappropriate agency for setting international standards. First, there is the potential conflict between the standards set by IASC and those set by the national bodies. Second, in many countries accounting standards need to be incorporated in law and set by political procedures. Third, there is no political and diplomatic recognition of IASC by national governments or international agreements. The IASC does, however, participate in the discussion on standards by the appropriate UN and OECD groups.

Burggraaff discusses the political pressures on IASC. He differentiates between political pressure coming from various interest groups in the private sector and political pressure from government bodies, and government agencies who are interested in international standards. The pressure that the various interest groups, from time to time, bring to the IASC, places the committee (IASC) in an uncomfortable dilemma. The pressure means that the committee decision-making process either has to be based on consensus and compromise or on resorting to underlying concepts. It is also argued that the IASC has no real authority to implement its recommendation and has to rely on the best efforts of individual members which most often are not the accounting standards-setting bodies of these countries.

Steps Toward Harmonisation:

Probably the question before us is not whether harmonisation is necessary. But is how harmonisation is to be done and achieved in all countries of the world. Many international congress of accountants have taken place. F.M. Richard, President of the Ninth International Congress of Accountants held at Paris in 1976 remarked:

"Almost all the international and national authors are in favour of the harmonisation of accounting and auditing principles, and some even considered that this harmonisation is essential and really urgent."

The eleven members of ICCAP (Internal Coordination Committee for the Accountancy Profession) representing Australia, Canada, Germany, France, India, Japan, Mexico, the Netherlands, the Philippines, the United Kingdom, and the United States, took a giant stride toward harmonisation as its first plenary session in April 1973 by its decision to form the International Accounting Standards Committee. The IASC has autonomy to promulgate accounting standards to be observed in the presentation of audited accounts and financial statements. The committee's objectives are to formulate and publish international accounting standards and to promote their worldwide acceptance and observance.

The IASC agreement provides that the professional accountancy bodies agree (a) to support the standards promulgated by the committee, (b) to use their "best endeavours":

- (i) To ensure that published financial statements comply with these standards or that there is disclosure of the extent to which they do not and to persuade governments, the authorities controlling securities markets and the industrial and business community that published financial statements should comply with these standards;
- (ii) to ensure (1) that the auditors satisfy themselves that the financial statements comply with these standards or, if the financial statements do not comply with these standards, that the fact of non-compliance is disclosed in the financial statements (2) that in the event of non-disclosure reference to non-compliance is made in the audit report;
- (iii) To ensure that as soon as possible, appropriate action is taken in respect of auditors whose audit reports do not meet the requirements of (ii) above.

The "best endeavours" have not produced uniformly good results. There are various reasons for this. Some countries argue that they can not require compliance locally until they are satisfied that the standards are internationally acceptable. Some countries say that local legislation is an obstacle to the introduction of international standards. In some countries local business community exercises resistance against the international standards. In many countries the accounting standards setting body which is a member of IASC, is under the direct control and guidance of government or of securities regulation organisation and neither of the latter is prepared to be overborne by an international body on which it is not represented. Due to these reasons local standards and international standards differ and, where they differ, local standards prevail and international standards tend to be ignored. Some accounting bodies, firms do not have, or do not exercise, the power of discipline over their members, and cannot therefore impose compliance with either national or international standards. Because of these obstacles, the international standards have not been integrated into the accepted accounting procedure and disclosure of their non-compliance has not been made either in financial statements or by the auditors.

The harmonisation whether on a voluntary basis or by legislation involves many difficulties and problems. The IASC has not been able to achieve good progress in establishing generally accepted international standards. Benson has given the following suggestions to bring harmonisation in international financial reporting:

1. Each country would pass legislation to the effect that as and when an international standard is set or amended by IASC, local standards, if they exist, should be brought into line; if local standards do not exist, the IASC standard should be adopted. Legislation of this character would enjoy the necessary degree flexibility.
2. The governing bodies of the accounting profession should formally acknowledge that it is their task, among many others, to apply disciplinary procedures when bad professional work, including the non-observance of standards, is brought to their notice.
3. IASC should be required to set a single standard on each topic; optional alternative should not normally be allowed.
4. In a transitional period, for example during which local company laws might have to be changed, departure from the international standards should be disclosed on the financial statements with reasons, and the effect quantified.
5. IASC, with some restructuring which might be necessary, should be formally recognised by governments as an international standard-setting body.
6. The standard should be basic. There should be no objection to local standards being more stringent than the basic standards.

7. In each country the local stock exchange and the local supervisory securities organisation (if such exists), would co-operate in taking appropriate action against companies which failed to comply with standards.

International uniformity of accounting principles is a desirable step toward worldwide reporting to investors. There is a need to propose new horizons to again reestablish a universal art of accounting. The harmonisation effort is being tackled by the IASC and the ICCP. These groups have spurred the internationalization process, and their activities will aid in establishing a perspective for launching new goals in the international accounting horizon. Rueschhoff argues:

“The international accountant must provide financial reports that are readily understood by investors around the world. Since international business activity is growing, he must know the financial reporting standards for international business transactions and investments. The increased interchange of foreign stockholdings among the citizens of the world requires that accounting principles be applied in a clear manner so that financial statement reader may be provided with digestible data... A knowledge of the current international accounting issues will strengthen international understanding. The improvement of international financial reporting will help the movement of economic trade and investment. Interrelationships in economic and financial affairs as well as in political and social affairs among citizens of various countries may even aid in achieving an international peace.”

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CHAPTER-14

ACCOUNTING FOR PRICE LEVEL CHANGES

The basic objective of accounting is the preparation of financial statements in a way that the income statement should disclose the true profit or loss made by the business during a particular period while the balance sheet must show a true and fair view of the financial position of the business on a particular date. Financial statements are prepared in monetary units, i.e., rupees, in our country. They can serve very well the basic objective if the value of such monetary units remains stable. This is possible only when there is a stability in the price levels. However, it has been our experience that over a period of time, the prices have not remained stable. There have been inflationary as well as deflationary tendencies. The inflationary tendencies have been more frequent and since 1931 they have been dominating economies of all the countries of the world. It is increasingly being accepted that inspite of all fiscal, monetary and fiscal measures, these tendencies are likely to stay and it seems unlikely that we will return to an era of stable prices in the near future.

Financial statements which are prepared according to the conventional or historical cost accounting system, therefore, do not reflect current economic realities. In the case of historical accounting system, accounts are prepared without regard to changes in the price levels. The assets are shown at the values they were purchased less any depreciation on such values. As a matter of fact, their values might have gone up on account of the inflationary tendencies. Similarly, the sales are recorded at the current market prices while the inventories are recorded at the prices at which they were purchased. It may be possible that goods sold may comprise those items which might have been purchased in earlier years when the prices were lower than the current year. Thus, neither the balance sheet nor the income statement shows the correct operating and financial position of the business.

PRICE LEVEL ACCOUNTING

In view of the above, it has been increasingly felt that the accountant will be failing in his duties if he continues to remain content with the time honoured and traditional system of accounting by historical cost. He should move with the time and evolve a suitable system of accounting to deal with the changing price levels.

Price level accounting may, therefore, be defined as that technique of accounting by which the financial statements are restated to reflect changes in the general price level. Such changes, as stated earlier, may be either inflationary or deflationary. Of course, inflation has come to stay and, therefore, price level accounting is more concerned with inflationary tendencies.

INFLATION ACCOUNTING

It will not be out of place here to define the term inflation accounting. According to the American Institute of Certified Public Accountants, "Inflation accounting is a system of accounting which purports to record as a built-in mechanism all economic events in terms of current cost." Thus, inflation accounting is a system of maintaining the accounts just like historical accounting. The difference lies in the process of matching-cost against revenue. In historical accounting cost represents historical cost wherein inflation accounting it represents the cost prevailing at the reporting date or time. "This matching process in inflation accounting should be automatic and inbuilt in the system itself and not *ad hoc* in nature dealing only with some economic and financial events. In other words, it will be wrong to equate replacement cost accounting with inflation accounting¹."

The distinctive features of inflation accounting are as follows :

- (i) The recording procedure is automatic.
- (ii) The unit of measurement is not assumed to be stable.
- (iii) It consider all elements of the financial statements and is not concerned only with fixed assets or closing stocks.
- (iv) Realisation principles are not followed rigidly, particularly, when recording long-term loans and fixed assets at the current value.

On the basis of the above explanation it is clear that inflation accounting should not be confused with current cost accounting or current purchasing power accounting (discussed later). Of course, they are the two important techniques which are being used for prevention of distortion of the

¹ Bhattacharya, A. *Theoretical Framework for Inflation Accounting*, published in "Topics in Accounting and Finance", p. 350

results shown by the financial statements on account of inflationary tendencies. Accounts all over the world have still to go a long way before developing a really effective and acceptable inflation accounting system.

LIMITATIONS OF CONVENTIONAL FINANCIAL STATEMENTS

The income statement and the balance-sheet prepared according to conventional or historical cost accounting system have been the subject of criticism by accountants, investors, financial analysts etc. on account of the following reasons :

- (i) **Fall to disclose current worth of the enterprise** The financial statements prepared under the conventional system are merely statements of historical facts. They do not show the true current worth of the enterprise.
- (ii) **Contains non-comparable Items** The financial statements contain items which are not comparable since they are usually a composite of historical and current costs. For example, a company constructed a building for a sum of Rs 5,00,000 in 1975 and constructed a similar building in 1989 at a cost of Rs 20,00,000, the total cost of building will be shown in the balance sheet at the end of 1989 as follows :

	Rs.
Building (1975)	5,00,000
Building (1989)	20,00,000
	25,00,000

The effect of non-comparable items can also be proved by taking items from the income statement. For example, the following are the figures of sales for three years.

Year	Sales	Average price Index
1989	1,00,000	100
1990	1,50,000	200
1991	2,00,000	275

The price index at the end of 1991 is 300. In case the figures of sales are compared without the price level adjustment, it appears that there has been a continuous increase in sales over a period of three years. However, if they are adjusted taking into consideration the change in the price level, the real situation would be different as shown below :

Year	Average price index	Unadjusted sales	Conversion factor	Revised sales
1989	100	1,00,000	300/100	3,00,000
1990	200	1,50,000	300/200	2,25,000
1991	275	2,00,000	300/275	2,18,182

The above table shows that the figure of sales, when adjusted for price level changes, are showing a constant declining trend.

- (iii) **Creates problems at the time of replacement** According to the conventional method, depreciation is charged on the historical cost of the asset. Problems, may, therefore, arise when the asset has to be replaced and larger funds are required on account of inflationary conditions. For example, if a machinery was purchased for Rs 1 lakh and its life was expected to be 10 years, a sum of Rs 10,000 would be charged as depreciation every year. If after ten years, the same asset can be purchased for Rs 1,50,000, the firm may have to face serious problems because of insufficiency of funds. The main purpose of providing depreciation may, therefore, be defeated.
- (iv) **Mixes holding and operating gains** In conventional accounting, gains on account of holding the inventories may be mixed up with the operating gains. For example, a business purchased 100 units of a product at Rs 6 per unit in 1990. It could sell only 50 of such units in that year. In 1991, it purchases another 100 units at Rs 8 per unit and sells all 150 units at Rs 10 per unit. In such a case the profit in 1991 as per historical accounting will be as follows

	Rs.
Sales (150 units x Rs 10)	1,500
Less: Cost of sales (50 x 6 + 100 x 8)	1,100
	400

As a matter of fact out of the total profit of Rs 400, a sum of Rs 100 (*i.e.*, 50×2) is only on account of holding the inventory. This is because if all the units sold had been purchased during 1991, the profit would have been only Rs 300 (*i.e.*, $150 \text{ units} \times \text{Rs } 2$). Thus, Rs 100 is the holding profit while Rs 300 is the operating profit. The historical accounting system, as seen above, does not make this distinction.

In general, it can be said that under inflationary conditions the reported profits are overstated and assets are understated when accounts are prepared according to conventional or historical accounting. Over-reporting of profits gives rise to a number of problems, *viz.* heavy taxation, heavy dividend, etc., resulting ultimately in heavy financial strain on the company. Moreover, it brings heavy erosion in the interpretative value of financial statements. All this has put more onerous responsibilities on management as observed Peter Drucker:

“There are the costs of today and the costs of tomorrow. I know of no business today which operates at such a rate of return that it can meet the costs of tomorrow. With today’s rates of inflation businesses are not making profits but only destroying capital. One of the primary tasks of management is to reduce the costs of tomorrow and extract the maximum possible out of available capital”.

METHODS OF ACCOUNTING FOR CHANGING PRICES

The following are the generally accepted methods of accounting for price level changes :

1. Current Purchasing Power Method or General Purchasing Power Method (*CPP* or *GPP* Method).
2. Current Cost Accounting Method (*CCA* Method).
3. Hybrid Method, *i.e.*, a mixture of *CPP* and *CCA* methods.

Current Purchasing Power Method

The method of current purchasing power was evolved by the Institute of Chartered Accountants of England and Wales by issue of the Provisional Statement of Standard Accounting Practice No. 7 (*SSAP-7*) entitled, “Accounting for Changes in the Purchasing Power of Money”, in May 1974.

According to this method all items in the financial statements are to be restated for changes in the general price level. For this purpose, any approved price index is used to convert the various items of the balance sheet and the profit and loss account. For example, an asset purchased for a sum of Rs 200 in 1970 would be valued in 1990 according to *CPP* Method at the amount which would be needed to buy the asset as per change in the general price index in 1990 as compared to 1970. Presuming that general price index was 150 in 1970 and 300 in 1990, the asset would be valued at Rs 400 (*i.e.*, $200 \times 300/150$) as per *CPP* Method. This is because the current purchasing power of a sum of Rs 200 spent in 1970 is equivalent to Rs 400 in 1990.

It should be noted that under the *CPP* Method, only the changes in general purchasing power of money are taken into account. It does not consider the changes in the value of individual assets. For example, a particular machine may have become cheaper over the last few years, whereas the general price index may have risen. In such a case, the value of the machine will also be raised in accordance with the general price index.

Preparation of the financial statements according to CPP Method The following steps are taken in preparing the financial statements.

- (i) **Conversion factor:** *CPP* Method requires the restatement of historical figures as disclosed in the financial statement at current purchasing prices. This is done by multiplying the historical figures by the conversion factor calculated as follows :
- $$\text{Conversion factor} = \frac{\text{Price Index at the date of conversion}}{\text{Price Index at the date the item arose}}$$

The retail price index is considered to be the appropriate price index under *CPP* Method.

Illustrations 14.1 A company purchased a machinery on 1990 for a sum of Rs 90,000. The retail price index on that date stood at 150. You are required to restate the value of the machinery according to *CPP* Method on 31st December, 1995 when the price index stood at 200.

Solution

$$\text{Conversion factor} = \frac{\text{Price Index at the date of conversion}}{\text{Price Index at the date the item arose}}$$

$$= \frac{200}{150} = \frac{4}{3}$$

Value of machinery on 31st December, 1995 after conversion

$$\begin{aligned}
 &= \text{Existing value} \times \text{Conversion factor} \\
 &= 9,000 \times \frac{4}{3} = \text{Rs. } 1,20,000
 \end{aligned}$$

Alternatively, Converted value of machinery

$$\begin{aligned}
 &= \frac{\text{Existing value} \times \text{Price index at the date of conversion}}{\text{Price index at the when item arose}} \\
 &= \frac{90,000 \times 200}{150} = \text{Rs. } 1,20,000
 \end{aligned}$$

In case one desires to know only the difference between existing value and the converted value of an item it can directly be known by applying the following formula :

$$\begin{aligned}
 \text{Difference} &= \text{Existing value} \times (\text{conversion factor} - 1) \\
 &= \text{Rs. } 90,000 \times (4/3 - 1) = \text{Rs. } 30,000
 \end{aligned}$$

(ii) **Mid-period conversion:** In case of transactions occurring throughout a period, it will be advisable to convert them according to the average index of the period. Such transactions generally include revenue items such as sales and purchases of goods, payment of expenses, etc. In case the information regarding average index is not available, it may be calculated by taking the average of the index numbers at the beginning and at the end of the period.

(iii) **Monetary and non-monetary items;** While converting the figures under CPP Method, a distinction is to be made between monetary items and non-monetary items.

Monetary items are those whose amounts are fixed by contract in terms of monetary units (rupees, dollars, pounds, etc.) regardless of changes in the general price level. Examples of monetary items are cash, debtors, creditors, loan capital, outstanding expenses, etc. Holders of monetary assets lose general purchasing power during a period of inflation, since their claims against the firm remain fixed irrespective of any change in the general price level. The converse applies to those having monetary liabilities. For example, a person lends to a firm a sum of Rs. 1,000 on 1st Jan. 1990, payable on 31st December, 1990. The price index on 1.1.90 is Rs. 100 while it is Rs. 150 on 31st December, 1990. On account of increase in the price level if the creditor is to be compensated for loss in purchasing power, he should be paid a sum of Rs. 1,500 (i.e., 1,000 15/100). However, he will be paid as per contract a sum of Rs. 1,000. Thus, the debtor (i.e., the firm) is gaining Rs. 500 while the creditor (i.e., the lender) is losing a sum of Rs. 500. Monetary items need no conversion since they are already stated in current rupees (dollars or pounds) at the end of the period to which they relate.

Non-monetary items. These are the items that cannot be stated in fixed monetary amounts. They include tangible items such as buildings, machinery, inventories of materials of finished goods meant for sale. For example, a building costing Rs. 15,000 in 1976 may sell for Rs. 35,000 today though it has been used and may also be of old fashion. This may largely be due to change in the general price level. Thus, non-monetary items do not carry a fixed value like monetary items. Hence, under CPP method, all such items are to be restated current general purchasing power.

Investments in bonds or debentures have the characteristics of fixed monetary claims and, therefore, they come in the category of monetary items. Preference shareholders also generally have a right to get only the fixed amount of their share capital and, therefore, they also fall in the category of monetary items. However, the holders of the equity share capital have the residual claim on a company's net assets. The equity interest is, therefore, a non-monetary item.

(iv) **Gain or loss on monetary items :** It has already been stated above that change in the purchasing power of money affects both monetary as well as non-monetary items. Of course in case of monetary items, the firm receives or pays amount fixed as per terms of the contract but it does gain or lose in terms of real purchasing power. Such gain or loss, termed as "general price level gain or loss", should be taken into account under the CPP method but it should be shown as a separate item in the restated income statement to arrive at the overall profit or loss. This is particularly important in case of gain since the amount may not be available for distribution by way of dividend on account of inadequate liquidity.

Illustration 14.2. Compute the net monetary result of X Company Ltd., as at 31st December, 1991. The relevant data are given below :

Particulars	1-1-91	31.12.91
	Rs.	Rs.
Cash	5,000	10,000
Book debts	20,000	25,000
Creditors	15,000	20,000
Loan	20,000	20,000
Retail price index numbers		
January 1, 1991		200
December 1, 1991		300
Average for the year		240

(B.Com., (Hons.) Delhi, 1982, adapted.)

Solution

STATEMENT SHOWING THE NET MONETARY RESULT ON ACCOUNT OF PRICE LEVEL CHANGES

	Rs.	Rs.
(i) Monetary liabilities as on 1-1-1991 should have gone up with increase in price indices (Rs. 35,000 × 1.5)	52,500	
(ii) Increases in monetary liabilities during 1991 which should have gone up with increase in price indices (Rs. 5,000 × 1.25)	<u>6,250</u>	
Monetary liabilities as 31-12-1991 should have stood at:	58,750	
However, the liabilities on 31-12-1991 stood at	<u>40,000</u>	
Gain on holding of monetary liabilities		18,750
(iii) Monetary assets as on 1-1-1991 should have gone up with increase in price indices (Rs 25,000 × 1.5)	37,500	
(iv) Increase in monetary assets during 1991 should have gone up with increase in price indices (Rs 10,000 × 1.25)	<u>12,500</u>	
Monetary assets on 31-12-1991 should have stood at:	50,000	
However, the monetary assets on 31-12-1991 stood at :	<u>35,000</u>	
Loss on holding monetary assets		(-) 15,000
Net gain on monetary items		3,750

Working Notes :

(i) *Conversion factors:*

(a) For items as on 1-1-1991 : $300/200 = 1.5$

(b) For items arising during 1991 : $300/240 = 1.25$

(ii) *Increase in monetary assets and liabilities during 1991*

	as on 1-1-1991	31-12-1991	Increase during 1991
(a) Monetary assets	25,000	35,000	10,000
(b) Monetary liabilities	35,000	40,000	5,000

(v) **Cost of Sales and Inventories:** The cost of sales and value of inventories depend upon the cost flow assumptions, i.e., first in, first out (FIFO) or 'last in, first out' (LIFO). According to the 'first in, first out' method, inventories first purchased are taken to be first issued to production or sold to customers; while according to "last in, first out" method inventories purchased in the last are taken to have been first issued to production or sold to customers. While restating the figures under CPP Method, it would be appropriate to keep in mind the cost flow assumptions, since they affect both the cost of sales and closing inventory as shown below

First In, First Out (FIFO) Method

- (i) **Cost of Sales.** It comprises entire opening stock and current purchases less closing stock.
 (ii) **Closing Inventory.** It comprises entirely current purchases. However, in case total sales are even less than the opening inventory, a part of the opening inventory may also become a part of the closing inventory.

Last In, First Out (LIFO) Method

- (i) **Cost of Sales.** It comprises current purchase only. However, if the current purchases are less than cost of sales, a part of the opening inventory may also become a part of cost of sales.
 (ii) **Closing Stock.** It comprises purchases made in the previous year or years.

The following indices are used under CPP Method for restating the historical figures :

- (i) For current purchass : Average index of the year.
 (ii) For opening stock : Index at the beginning of the year.
 (iii) For purchases of the previous year(s) : Average indices for the relevant year(s).

Illustration 14.3. From the following details ascertain (a) Cost of Sales and (b) Closing Inventory as per CPP Method when the firm is following FIFO Method.

	Historical Rs.	Price Index
Opening stock on 1.1.1991	4,000	80
Purchases during 1991	20,000	125
Closing stock (out of purchases made in the last quarter)	3,000	120
Index No. on 31st December, 1991		140

Solution

COST OF SALES AND CLOSING INVENTORY (FIFO)				
Particulars	Historical cost basis	Conversion factor	Converted amount under CPP	
Opening inventory	4,000	140/80	7,000	
Add : Purchases	20,000	140/125	22,400	
	24,000		29,400	
Less : Closing Inventory (b)	3,000		3,500	
Cost of goods sold (a)	21,000		25,900	

Illustration 14.4. From the following data calculate (a) cost of sales and (b) closing inventory under CPP method persuming that the firm is following LIFO Method for inventory valuation.

	Rs.	
Inventory as on 1.1.1990	8,000	100
Purchases during 1990	48,000	
Inventory as on 31.12.1990	12,000	
Price Index as on 1.1.1990		140
Average Price Index for 1990		125

Solution

COST OF SALES AND CLOSING INVENTORY (FIFO)			
Particulars	Historical cost basis	Conversion factor	Converted amount under CPP
Inventory as on 1.1.1990	8,000	140/100	11,200

Add : Purchases	48,000	140/125	53,760
	56,000		64,960
Less : Closing Inventory (b)			
From opening inventory	8,000	140/100	11,200
From current purchases	4,000	140/125	4,480
Cost of goods sold (a)	44,000		42,280

Illustration 14.5 Explain and ascertain net monetary result at 1990 end from the under mentioned data

	1990 (Start)	1990 (End)
	Rs.	Rs.
Bank	2,000	3,000
Accounts receivable	10,000	12,000
Accounts payable	15,000	10,000
1990 Start	100	
1990 End	200	
1990 Average	160	

(B Com Hons, Delhi 1990)

Solution

CHANGE IN MONETARY ASSETS AND LIABILITIES DURING 1990

Monetary	1990 (start)	1990 (end)	Increase (+) Decrease (-)
	Rs.	Rs.	Rs.
Monetary assets:			
Bank	2,000	3,000	(+) 1,000
Accounts receivable	10,000	12,000	(+) 2,000
	12,000	15,000	3,000
Monetary liabilities :			
Accounts payable	15,000	10,000	(-) 5,000
Excess of monetary assets	- 3,000	+ 5,000	8,000

Computation of Conversion Factor $\frac{\text{Price Index at the date of conversion}}{\text{Price Index at the date the item arose}}$

For item held on 1990 start = $200/100 = 2$
 For items held on 1990 end = $200/200 = 1$
 For items arising during 1990 = $200/160 = 1.25$

COMPUTATION OF MONETARY GAIN OR LOSS

Item value	Historical Factor	Conversion Value	CPP
	Rs.		Rs.
Assets :			
Items at 1990 start	12,000	2	24,000
Items arising during 1990	3,000	1.25	3,750
			27,750
Items at 1990 end	15,000	1.00	5,000
Loss			2,750
Liabilities :			
Items at 1990 start	15,000	2	30,000
Items arising during 1990	- 5,000	1.25	6,250
			13,750
Items at 1990 end	10,000	1	0,000
Gain			3,750
Net monetary gain (13,750 - 12,750)			1,000

Determination of Profit

The profit under *CPP* Method can be determined in two ways:

Net change method This method is based on the normal accounting principle that profit is the change in equity during an accounting period. In order to determine this change the following steps are taken :

- Opening balance sheet prepared under historical cost accounting method is converted into *CPP* terms as at the end of the year. This is done by application of proper conversion factors to both monetary as well as non-monetary items. Equity share capital is also converted. The difference in the balance sheet is taken as reserves. Alternatively, the equity share capital may not be converted and the difference in balance sheet be taken as equity.
- Closing balance sheet prepared under historical cost accounting is also converted. Of course, monetary items are not restated, as explained earlier. The difference between the two sides of the balance sheet is put as Reserves after converting the equity capital. Alternatively, the equity capital may not be restated in *CPP* terms and the balance be taken as equity.
- Profit is equivalent to net change in Reserves (where equity capital has also been converted) or a net change in Equity (where equity capital has not been restated).

Conversion or restatement of income statement method In case of this method, the income statement prepared on historical cost basis is restated in *CPP* terms generally on the following basis :

- Sales and operating expenses are converted at the average rate applicable for the year.
- Cost of sales is converted as per cost flow assumption (*FIFO* or *UFO*) as explained in the preceding pages.
- Fixed assets are converted on the basis of the indices prevailing on the dates they were purchases. The same applies to depreciation,
- Taxes and dividends paid are converted on the basis of indices that were prevalent on the dates they were paid.
- Gain or loss on account of monetary items should be calculated and stated separately in Restated Income Statement to arrive at the overall figure of profit or loss.

Illustration 14.6 Following is the comparative balance sheet of *ABC Ltd.* as on 31st December 1990 and 1991:

COMPARATIVE BALANCE SHEET					
Liabilities and Capital	1990	1991	Assets	1990	1991
	Rs.	Rs.		Rs.	Rs.
Current liabilities	80,000	90,000	Cash and receivables	2,00,000	2,60,000
Long-term liabilities	1,00,000	1,16,000	Inventories (<i>FIFO</i> method)	1,50,000	1,30,000
Equity share capital (Rs. 10)	1,40,000	1,40,000	Land	40,000	40,000
Share premium	2,80,000	2,80,000	Equipment	2,10,000	2,70,000
Reserves and surplus	(Nil)	50,000	Less : Accumulated depreciation	(Nil)	(24,000)
	6,00,000	6,76,000		6,00,000	6,76,000

The income statement of the company for the year 1991 disclosed the following information:

INCOME STATEMENT		
for the year ending, 31st Dec., 1991		
Particulars	Rs.	Rs.
Net Sales		8,00,000
Less : Cost of goods sold :		
Opening inventories (<i>FIFO</i>)	1,50,000	
Purchases (Net)	5,00,000	
Cost of goods available for sale	6,50,000	
Less : Closing inventory (<i>FIFO</i>)	1,30,000	5,20,000
Gross Profit		2,80,000
Less : Operating expenses (excluding depreciation)		
Depreciation	96,000	
Profit before tax	24,000	1,20,000
		1,60,000
Less : Income tax		70,000

Profit after tax	90,000
Less : Dividend paid	40,000
Retained earnings	50,000

Equipment costing Rs 60,000 was acquired on July 1, 1991 when the general price index was 157.5. The amount of depreciation has been calculated as follows:

	<i>Rs.</i>
10% on Rs. 2,10,000	21,000
5% on Rs. 60,000 (Rate being 10% p.a.)	3,000
	24,000

Sales, purchases, operating expenses (excluding depreciation) took place evenly throughout the year. Inventories are priced according to first in, first out method. Goods in closing inventories were acquired evenly throughout the year. The dividend of Rs 40,000 was declared and paid at the end of 1991. Income tax accrued throughout the year. You are required to recast the above statement taking into account the price level adjustments under CPP Method. The general price indices are as follows:

At the end of year 1990 (and beginning of the year 1991)	150
Average for the year 1991	157.5
At the end of the year 1991	163.8

Solution

It will be necessary to compute conversion factor for restating the figures under CPP Method.

Conversion factors

For items to which Price Index in the beginning of 1991 is applicable,	$163.8 \div 150 = 1.093$
For items to which Average Index is applicable	$163.8 \div 157.5 = 1.040$
For items to which Price Index at the end of 1991 is applicable	$163.8 \div 163.8 = 1$

ABC Limited

INCOME STATEMENT

for the year ending, 31st Dec., 1991

	<i>As per historical cost basis</i>	<i>Conversion factor</i>	<i>Restated under CPP Method (Rs.)</i>
Sales (1)	8,00,000	1.040	8,32,000
Cost of goods sold :			
Opening inventory	1,50,000	1.092	1,63,800
Add : Purchases	5,00,000	1.040	5,20,000
Cost of goods available for sale	6,50,000		6,83,800
Less : Closing inventory			
(Out of current purchases)	1,30,000	1.040	1,35,200
Cost of goods sold (2)	5,20,000		5,48,600
Gross profit (1) - (2) = 3	2,80,000		2,83,400
Operating expenses (excluding depreciation)	96,000		99,840
Depreciation	24,200	$21,000 \times 1.092$ $= 22,932$ $3,000 \times 1.040$ $= 3,120$	26,052
Total operating expenses (4)	1,20,000		1,25,892
Net Profit before "general price level gain or			

loss ² (3) - (4)	1,60,000		
General price-level loss (see statement below)			1,57,508
Net profit after general price level loss			4,800
Less : Income tax	70,000	1.040	72,800
Net Profit	90,000		79,908
Less : Dividend paid	40,000	1.000	40,000
Retained earnings at the end of 1991	50,000	1.000	

COMPUTATION OF GENERAL PRICE-LEVEL GAIN OR LOSS

for the year ending, 31st Dec., 1991

	(Rs.)	(Rs.)	(Rs.)
Net monetary items as on 1.1.1991			
Cash and receivables	2,00,000		
Less : Current liabilities	80,000		
Long-term liabilities	1,00,000	1,80,000	
		20,000	1.092
			21,840
Add : Source of net monetary items during 1991 :			
Sales	8,00,000	1.040	8,32,000
Total sources (1)	8,20,000		8,53,840
Uses of net monetary items during 1991			
Purchases	5,00,000	1.040	5,20,000
Operating expenses (excluding depreciation)	96,000	1.040	99,840
Income tax	70,000	1.040	72,800
Dividends paid	40,000	1.000	40,000
Purchases of equipments	60,000	1.040	62,400
	7,66,000		7,95,040
Net monetary items as should have been if there were no general price level gain or loss (1) - (2)			58,800
Net monetary items actually existing as on 31st Dec., 1991	2,60,000		
Less : Current liabilities	90,000		
Long-term liabilities	1,16,000	2,06,000	54,000
General price-level loss during 1991 (58,800 - 54,000)			4,800

Working Notes :

1. Monetary items at the end of 1991 have not been adjusted since they are already standing at current values at the end of that year.
2. The amount of retained earnings has been taken from the Income Statement as adjusted according to CPP Method.
3. In the preceding pages, the net profit of the business has been determined by restating all items in CPP terms. In case it is desired to determine the net profit after tax for the year 1991 according to 'net change method', this can be done with the help of comparative balance sheet restated in CPP terms as shown on page 3.202; Net profit for 1991 will be the excess of Reserves in 1991 over that in 1990 as stated in CPP terms, as shown below :

Assets in CPP terms as on 31.12.1991	Rs.
	7,04,548
Add : Dividends paid on 31-12-91	40,000
	7,44,548
Less : Liabilities in CPP terms as on 31-12-1991	6,64,640
Reserves as on 31-12-1991	79,908

Less : Reserves as on 1-12-1991	(Nil)
Net profit for 1991 (after tax but before dividends)	79,908

Criticism of the CPP Method

The Current Purchasing Power Method contained in *SSAP-7* did not find favour with a large number of accountants, economists, and Government authorities on account of the following reasons:

- (1) *CPP* Method is based on Index Nos. which are statistical averages. The method cannot, therefore, be applied with precision to individual firms.
- (2) The selection of a suitable price index is a difficult task, since there are various price indices characterising different price situations.
- (3) The method deals with changes in the general price level and not with changes in prices of individual items, except in so far as individual prices happened to move in step with general price index.

Current Cost Accounting Method

In view of the general complaint that *CPP* method is not adequate for reporting price level changes, the U.K. Government appointed a committee under the chairmanship of Sir Francis Sandilands. The report of the committee was published in September, 1975 and *SSAP-7* was withdrawn. In its report, the committee recommended the adoption of current cost accounting system as a method for correcting the deficiencies of the historical cost accounting which fails to provide sufficient information as required by the users of accounts. The current cost accounting system has been extensively studied and debated. It has now been finalised by the issue of Statement of Standard Accounting Practice-16 (*SSAP-16*) in March, 1980, by the Accounting Committee of U.K.

Main Feature

The main features of the *CCA* method are as follows:

Meaning The method requires each item of financial statements to be restated in terms of the current value of the item. No cognizance is taken of changes in the general purchasing power of money. Assets are shown in terms of what such assets would currently cost.

Similarly, the profits are computed on the basis of what the cost would have been at the date of sale rather than the actual amount paid. For example, if goods purchased for Rs 8 are worth Rs 10 on the date of sale are sold for Rs 12, profit will be taken as Rs 2 (and not Rs 4) based on their current cost.

Objectives The method seeks to ensure that adequate provision/adjustments are made for the maintenance and replacement of the operating assets of the company, at least at the minimum physical levels at which the enterprise can operate efficiently and not only for the year under the review but also for the future.

The operating assets of an enterprise comprise (a) the fixed assets, (b) the stock-in-trade (of raw materials and finished goods), and (c) the net monetary working capital (that is, the amount of its debtors less the amount of its creditors). Whereas under the historical basis of accounting these assets are shown at their depreciated original cost under the current cost accounting system these are shown at their current cost or value which may be higher or lower than the former. This provides a more realistic statement of the present value of the assets employed in the business and thus enable a more meaningful assessment to be made of the real profit earned on the real value of such assets.

Adjustments/provisions In order to achieve the objectives stated above, the following adjustments/provisions are usually made.

Revaluation Adjustment. The fixed assets are shown at their "Value to the business" and not at their depreciated original cost. "Value to the business" means the amount which the company would lose, if it were deprived of the assets. It may be defined in any one of the following ways;

- (a) **Net current replacement value** : This refers to the money now required to buy a new asset of the same type as an existing one less an amount of depreciation that recognises the fact that the true replacement of the asset would not be a new asset but an asset which has the same remaining useful life as the existing asset. For example, a machine whose total life is 10 years and which has already run for five years can now be purchased as a new piece for Rs 60,000. Assuming that the machine has no scrap value, the net replacement cost of the machine would be Rs 60,000 less depreciation for 5 years, i.e., Rs 30,000.

¹ In U.S.A., *Financial Accounting Standards Board*, issued in Oct. 1979 FAS-33 for reporting price-level change.

- (b) *Net realisable value* : This is the value which is represented by the net cash proceeds if the existing asset is sold now.
- (c) *Economic/recoverable value* : This refers to the present value of net income that will be earned for using the existing assets during the rest of its life. For example a machine purchased 10 years ago for Rs 50,000 has a book value of Rs 25,000 after being used for 5 years. The machine is expected to generate a net cash inflow of Rs 6,000 each year for the remaining period of its life of 5 years, i.e., Rs 30,000 in total. However, the sum (Rs 30,000) will accrue over the next 5 years and not immediately. Hence, it should be discounted at a proper rate and the present value of the future cash inflows should be ascertained.

Out of the three values discussed above, SSAP-16 recommends the use of net current replacement value. Such value should generally be determined on the basis of price indices for the various fixed assets.

For this purpose even different types of production equipments are also being treated as different assets. However, in case the economic/recoverable value of a fixed assets is less than its replacement value, it should be valued on the former basis.

The difference between the value of fixed assets under Current Cost Accounting System and Historical Cost Accounting System is transferred to a capital reserve styled as "Current Cost Accounting Reserve".

Illustration 14.7 A firm purchased a machinery for a sum of Rs 10 lakhs on January 1, 1987. It had an expected life of 10 years without any scrap value. The price indices for the asset were as follows :

January 1, 1987	100
January 1, 1990	160
December 31, 1990	175

You are required to value the machinery on January 1, 1990 and December 31, 1990, both according to Historical Cost Accounting System and Current Cost Accounting System, charging depreciation on 'straight line basis'.

Solution

STATEMENT SHOWING THE VALUE OF MACHINERY

Particulars	January 1, 1990		December 31, 1990	
	Historical Cost (Rs.)	Current Cost (Rs.)	Historical Cost (Rs.)	Current Cost (Rs.)
Cost	10,00,000	16,00,000	10,00,000	17,50,000
Depreciation (3-4 Yrs.)	3,00,000	4,80,000	4,00,000	7,00,000
	7,00,000	11,20,000	6,00,000	10,50,000

The balance sheet as on 31 st December, 1990 as prepared under CCA would show the machinery at Rs. 10,50,000 as compared to Rs 6 lakhs under HCA. The excess of Rs 4,50,000 will be put to "Current Cost Accounting Reserve".

In case the company desires to show the machinery at current costs on 31 December, 1990, in place of historical cost, the increase of Rs 7,50,000 in the value of machinery would be debited to Machinery Account and credited to Current Cost Accounting Reserve. The increase in depreciation amount of Rs 4,00,000 will be charged to Current Cost Accounting Reserve and credited to the Machinery Account. Thus, the net increase in the value of Machinery would be Rs 3,50,000 and Current Cost Accounting Reserve will also stand at Rs 3,50,000.

Depreciation Adjustment. The charge to the profit and loss account for depreciation should be equal to the value of the fixed assets consumed during the period. When the fixed assets are valued on the basis of their net current replacement cost the charge should be based on such cost. A suitable "depreciation adjustment" is, therefore, required in historical cost profit to determine the current cost profit.

Depreciation Adjustment may be ascertained according to any of the following two bases :

On the basis of total replacement cost of the asset According to this method "Depreciation Adjustment" may be computed as follows:

Required Depreciation Provision for the accounting period as per CCA
Less: Depreciation charged for the accounting period as per HCA
Depreciation Adjustment

Illustration 14.8 On the basis of figures of Illustration 5.7, the amount of depreciation adjustment to be made in the accounts of 1990 will be ascertained as follows :

Depreciation at 10% on Current Cost of Rs 17,50,000	1,75,000
Less : Depreciation charged for 1990 as per HCA	1,00,000
Depreciation Adjustment	75,000

On the basis of average current cost of assets The depreciation adjustment in the above illustration has been made by reference to the Current Cost of the asset on the balance sheet date. However, strictly speaking, this should be done on the basis of the average Current Cost of the asset during the year. Average current cost may be ascertained as follows

$$\frac{\text{Current Cost of the asset in the beginning of the year} + \text{Current Cost of the asset at the end of the year}}{2}$$

Alternatively, depreciation for the current year may be ascertained as follows :

Depreciation for the full period (say a year) on current cost of the asset in the beginning of the accounting period
Add: Depreciation for half the period (say six months) on increase in the current costs during the year presuming that such increase was gradual
Less : Depreciation charged as per HCA
Depreciation adjustment

The following entry will be passed for depreciation adjustment :

Profit & Loss A/c	Dr.
To Current cost accounting reserve	

Illustration 14.9 Taking the figures of Illustration 14.7 the amount of depreciation adjustment at the end of year 1990 will be ascertained as follows :

	Rs.
Depreciation at 10% on Rs. 16,00,000 (i.e., the current cost of Rs. 1.1.1990)	1,60,000
Depreciation 10% on Rs. 1,50,000 for 6 months (since the increase is taken as gradual)	7,500
	1,67,500
Less : Depreciation charged for 1990 according to HCA	1,00,000
Depreciation adjustment	67,500

The amount of Depreciation Adjustment Rs 67,500 will be charged to Profit & Loss Account of 1990 on its being redrawn on CCA basis, the credit being given to Current Cost Accounting Reserve.

This means the amount of Current Cost Accounting Reserve will increase to Rs. 4,17,500 (i.e. Rs 3,50,000 + Rs 67,500) at the end of 1990.

It may be noted that irrespective of the method followed for computing "Depreciation Adjustment", the Revaluation Adjustment will be based on the Total Current Cost of the Asset as computed under point (1) above

Illustration 14.10 (Accounting for Price Level Changes). Zero Limited commenced its business on 1st April, 1996. 2,00,000 equity shares of Rs 10 each at par and 12.5% debentures of the aggregate value of Rs. 2,00,000 were issued and fully taken up. The proceeds utilised as under :

	Rs.
Fixtures and equipments (Estimated Life 10 years, no scrap value)	16,00,000
Goods purchased for resale at Rs 200 per unit	6,00,000

The goods were entirely sold by 31st January, 1997 at a profit of 40% on selling price.

Collections from debtors outstanding on 31st March amounted to Rs 60,000, goods sold were replaced at a cost of Rs 7,20,000, the number of units purchased being the same as before. A payment of Rs 40,000 to a supplier was outstanding as on 31st March, 1997.

The replaced goods remained entirely in stock on 31 st March, 1997.

Replacement cost of fixtures and equipments (depreciation on straight line basis) was Rs 20,00,000 as on 31st March, 1997.

Draft the Profit and Loss Account and the Balance Sheet on replacement cost (entry value) basis and on historical cost basis.

(C.A. Final, November 1997)

Solution

PROFIT AND LOSS ACCOUNT
for the year ended, 31st March, 1997

Particulars	Historical Cost	Replacement Cost
	Basis	Basis
	Rs.	Rs.
Sales	10,00,000	10,00,000
Less : Cost of Sales	6,00,000	7,20,000
Gross Profit	4,00,000	2,80,000
Less : Depreciation	1,60,000	1,80,000
	2,40,000	1,00,000
Less : Debentures Interest	25,000	25,000
Net Profit	2,15,000	75,000

BALANCE SHEET OF ZERO LIMITED

as at 31st March, 1997

Liabilities	Historical	Replacement	Assets	Historical	Replacement
	Cost Basis	Cost Basis		Cost Basis	Cost Basis
	Rs.	Rs.		Rs.	Rs.
Equity share capital	20,00,000	20,00,000	Fixtures and equipments	14,40,000	18,00,000
Profit and loss A/c	2,15,000	75,000	Stock	7,20,000	8,40,000
Replacement reserve	—	6,20,000	Debtors	60,000	60,000
12.5% Debentures	2,00,000	2,00,000	Cash at Bank	2,35,000	2,35,000
Creditors	40,000	40,000			
	24,55,000	29,35,000		24,35,000	29,35,000

Working Notes :

1. Replacement cost of sales has been computed on the basis of replacement cost at the date of sale [i.e, 3,000 units x Rs 240. = Rs 7,20,000].
2. Under replacement cost basis, depreciation has been calculated on the average basis [18% of [Rs. 16,00,000 + 20,00,000] + 2 = Rs 1,80,000].
3. Net Current Replacement Cost of Fixture and Equipment has been computed as follows :

	Rs.
Gross Replacement Cost	20,00,000
Less : Depreciation (10% of Rs. 20,00,000)	2,00,000
	18,00,000

4. Replacement Reserve = Realised Holding Gains + Holding Gains

	Realised Holding Gains	Unrealised Holding Gains
	Rs.	Rs.
Stock :		
Sold [replacement cost at the date of sale - historical cost	1,20,000	
- 7,20,000 - 6,00,000]		

Unsold [Closing Stock × (Closing Rate - Rate at the Date of Purchase) = 3,000 × (280 - 240)] 1,20,000

Fixtures and Equipments :

Depreciation (1,80,000 - 1,60,000) 20,000

Net Book value at year end (18,00,000 - 14,40,000) 3,60,000

1,40,000 4,80,000

R

5. Cash at Bank Balances

Sales 10,00,000

Less : Outstanding amount 60,000

9,40,000

Less : Payment for Purchases (7,20,000 - 40,000) 6,80,000

2,60,000

Less : Debenture interest 25,000

Cash and Balance 2,35,000

Illustration 14.11 X Ltd. had the following fixed assets on 31-12-98 :

Assets	Cost (Rs.)	Depreciation (Rs.)	Net (Rs.)
Land	30,000		30,000
Building	80,000	24,000	56,000
Plant	2,60,000	96,000	1,64,000
	3,70,000	1,20,000	2,50,000

Plant includes Rs 60,000 installed on 1-1-98, depreciation was charged at 5% on building, 10% on plant according to straight line method. Replacement cost indices are as follows :

Assets	On the date of		
	Acquisition	As on 1.1.98	As on 31.12.98
Land	100	250	300
Building	100	200	220
Plant	100	180	225

You are required to show how the balance sheet items will be affected by the changes according to CCA method.

Solution

Two items of balance sheet which will be affected under the CCA System are Fixed Assets and Current Cost Accounting Reserve.

(i)

FIXED ASSETS

Assets	Current Cost (Rs.)	Depreciation on Current Cost (Rs.)	Net (Rs.)
Land	90,000		90,000
Building	1,76,000	52,800	1,23,200
Plant and Machinery	5,25,000	2,10,000	3,15,000
	7,91,000	2,62,800	5,28,200

(ii)

CURRENT COST ACCOUNTING RESERVE

Particulars	Rs.
Increase in the cost fixed assets (7,91,000 - 3,70,000)	4,21,000
Less : Increase in depreciation (2,62,800 - 1,20,000)	(1,42,800)

	2,78,200
Add : Depreciation Adjustment [Working Note (iii)]	25,650
	3,03,850

Working Notes :

<i>(a) Computation of Current Costs :</i>	
Land : $30,000 \times 300 \div 100$	90,000
Building : $80,000 \times 220 \div 100$	1,76,000
Plant : as on 1.1.98 : $2,00,000 \times 225 \div 100$	= 4,50,000
Addition during the year : $60,000 \times 225 \div 180$	= 75,000
	5,25,000
	7,91,000
<i>(b) Computation of Depreciation, till date :</i>	
Building : $24,000 \times 220 \div 100$	52,800
Plant : as on 1.1.1998 : $90,000 \times 225 \div 100$	= 2,02,500
Addition during the year : $60,000 \times 225 \div 180$	= 7,500
	2,10,000
	2,62,800
<i>(c) Depreciation Adjustment :</i>	
<i>(i) Building : Current cost on 1.1.98</i>	
	1,60,000
Increase during the year	16,000
Depreciation @ 5% on 1,60,000 for full year	8,000
on 16,000 for half year	400
or 5% on $1,60,000 + 1,76,000 \div 2$	8,400
Already charged in account - 5% on 80,000	4,000
Adjustment required	4,400
<i>(ii) Plant and Machinery : Current Cost on 1.1.98</i>	
	3,60,000
Increase in 1998	90,000
Addition (on 1.1.98)	60,000
Increase in value of the addition	15,000
Depreciation @ 10% on Rs. 3,60,000 for full year	36,000
Rs. 90,000 for half year	4,500
Rs. 60,000 for half year	6,000
Rs. 15,000 for half year	750
or 10% on $4,20,000 + 5,25,000 \div 2$	47,250
Already charged in accounts	26,000
Adjustment required	21,250
Total Depreciation adjustment required : (i) + (ii)	25,650

*Depreciation on the additional plant purchased during the year would be Rs. 6,000. On the balance it would be Rs. 90,000.

Backlog Depreciation When the Fixed Assets are revalued every year there will also be shortfall of depreciation representing the effect of price rise during the year on the accumulated depreciation till date. This shortfall is called "Back-log Depreciation" which is the amount needed to uplift the accumulated depreciation to a figure needed to cover the total depreciation provision based on the replacement cost at the year end. This backlog depreciation arising out of current cost is charged against the Current Cost Accounting Reserve and credited to the Provision for Depreciation Account.

The need for adjustment of backlog depreciation will arise whenever a depreciating asset is revalued.

Illustration 14.12 Taking the figure of Illustration 5.7 and presuming that the firm first decided to prepare financial statement as per CCA method at the end of December 31, 1989, the amount of backlog depreciation for the year ended December 31, 1990 would be as follows :

Depreciation provision which should have been there on 1.1.1990 on the current cost of Rs. 17,50,000 at 10%	5,25,000
Less : Depreciation provision existing on January 1, 1980	4,80,000
Backlog depreciation	45,000

Tutorial Note :

The students may note the balance of Depreciation Provision of Rs. 7,00,000 at the end of December 31, 1990 consists of the following :

Depreciation provision as per HCA on Dec. 31, 1989	3,00,000
Backlog depreciation for 1994, when system was changed from HCA to CCA (i.e., 4,80,000 - 3,00,000)	1,80,000
Backlog depreciation for 1990 calculated as above	45,000
Depreciation Provision for the Current year	1,75,000
	7,00,000

Illustration 14.13 A firm purchased a fixed asset on January 1, 1995 for Rs 30,000 having a life of three years without any scrap value. The inflation rate is 20%. Show the relevant account for three years making suitable adjustment as per Current Cost Accounting (CCA) system.

Solution

FIXED ASSET ACCOUNT					
Date	Particulars	Rs.	Date	Particulars	Rs.
1995			1995		
Jan. 1	To Bank	30,000	Dec. 31	By Balance c/d	36,000
Dec. 31	To CCA Reserve (Revaluations adjustment)	6,000			
		36,000			36,000
1996					
Jan. 1	To Balance b/d	36,000	Dec. 31	By Balance c/d	43,200
Dec. 31	To CCA Reserve (Revaluations adjustments)	7,200			
		43,200			43,200
1997					
Jan. 1	To Balance b/d	43,200	Dec. 31	By Balance c/d	51,840
Dec. 31	To CCA Reserve (Revaluations adjustment)	8,640			
		51,840			51,840

DEPRECIATION PROVISION ACCOUNT					
Date	Particulars	Rs.	Date	Particulars	Rs.
1995			1995		
Dec. 31	To Balance c/d	12,000	Dec. 31	By P & L A/c (Depreciation as per HCA)	10,000
			Dec. 31	By CCA Reserve (Dep. adjustment)	2,000
		12,000			12,000
1996			1996		
Dec. 31	To Balance c/d	28,800	Jan. 1	By Balance b/d	12,000

			Dec. 31	By P & L A/c (Dep. as per HCA)	10,000
			Dec. 31	By CCA Reserve (backlog depreciation)	2,400
			Dec. 31	By CCA Reserve (Dep. adjustment)	4,400
		28,800			28,800

1997			1997		
Dec. 31	To Balance c/d	51,840	Jan. 1	By Balance b/d	28,800
			Dec. 31	By P & L A/c (Dep. as per HCA)	10,000
			Dec. 31	By CCA Reserve (Dep. adjustment)	7,280
			Dec. 31	By CCA Reserve (backlog depreciation)	5,700

CCA RESERVE ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1995			1995		
Dec. 31	To Depreciation Provision (Dep. on increased value for 1995)	2,000	Dec. 31	By Fixed Assets A/c (revaluation adjustment)	6,000
Dec. 31	To Balance c/d	6,000	Dec. 31	By P & L A/c (Dep. Adjustment)	2,000
		8,000			8,000
1996			1996		
Dec. 31	To Depreciation Provision (backlog Dep. 14,400 - 12,000)	2,400	Jan. 1	By Balance b/d	6,000
Dec. 31	To Depreciation Provision A/c (Dep. on increased value for 1996) (1/3 of 43,200 - 30,000)	4,400	Dec. 31	By Fixed Asset A/c (revaluation adj.)	7,200
Dec. 31	To Balance c/d	10,800	Dec. 31	By P & L A/c	4,400
		17,600			17,600
1997			1997		
Dec. 31	To Depreciation provision (backlog dep. : (34,560 - 28,800)	5,760	Jan. 1	By Balance b/d	10,800
	To Dep. provision A/c (1/3 of 51,840 - 30,000)	7,280	Dec. 31	By Fixed Asset A/c (revaluation adj.)	8,640
	To Balance c/d	13,680	Dec. 31	By P & L A/c (Depreciation adj.) (17,280 - 10,000)	7,280
		26,720			26,720

PROFIT & LOSS ACCOUNT

Accounting for Price Level Changes

Date	Particulars	Rs.	Date	Particulars	Rs
1995	To Dep. Provision A/c	10,000			
	To CCA Reserve A/c	2,000			
		12,000			
1996	To Dep. Provision A/c	10,000			
	To CCA Reserve A/c	4,400			
		14,400			
1997	To Dep. Provision A/c	10,000			
	To CCA Reserve A/c	7,280			
		17,280			

Working Notes:

1. Computation of Depreciation Adjustment

Year-1995	Rs
Depreciation (30,000 + 20% = 36,000/3)	12,000
Less : Depreciation charged as per HCA (30,000/3)	10,000
Depreciation Adjustment	2,000
Year-1996	
Depreciation as per CCA System (36,000 + 20% = 43,200/3)	14,400
Less : Depreciation charged as per HCA	
Depreciation Adjustment	10,000
Year-1997	
Depreciation as per CCA System (43,200 + 20% = 51,840/3)	17,280
Less : Depreciation charged as per HCA	10,000
Depreciation Adjustment	7,280

The Journal Entry is :

P & L A/c	Dr.
To CCA Reserve A/c	

2. Computation of revaluation adjustment on fixed asset :

Year-1995	Rs
Replacement cost at the end of 1995 (30,000 × 120/100)	36,000
Less : Original cost of the asset	
Revaluation Adjustment	30,000
Year-1996	
Replacement cost of the end of 1996 (36,000 × 120/100)	43,200
Less : Replacement cost at the beginning of 1996	36,000
Revaluation Adjustment	7,200
Year-1997	
Replacement cost at the end of 1997 (43,200 × 120/100)	51,840

Less : Replacement cost at the beginning of 1997	43,200
Revaluation Adjustment	8,640

The Journal Entry is :

Fixed Asset A/c	Dr.
To CCA Reserve	

3. Computation of Backlog Depreciation

Year-1995 Nil

Year-1996

Replacement cost at the end of 1996		43,200
Required Depreciation Provision as per CCA at the end of 1996 ($2 \times 43,200/3$)		28,800
Actual depreciation provision :		
Balance as on 1.1.1996	10,000	
Dep. for the year as per HCA	10,000	
Dep. Adjustment	4,400	24,400
Backlog Depreciation		4,400

Year-1997

Required Depreciation Provision at the end of 1997 as per CCA ($51,840 \times 3/3$)		51,840
Actual Depreciation Provision :		
Depreciation Provision Balance as on 1.1.1997	28,800	
Depreciation for the year as per HCA	10,000	
Depreciation Adjustment	7,280	46,080
Backlog Depreciation		5,760

The Journal Entry is :

CCA Reserve	Dr.
To Depreciation Provision A/c	

The result shown by the above ledger accounts can be summarised as follows :

Year end	Replacement cost Rs.	Baclog Rs.	HC Rs.	Depreciation		Total Charged against retained profits Rs.
				CC Adjustment (Dep. Adj.) Rs.		
1.	36,600	-	10,000	2,000		12,000
2.	43,200	2,400	10,000	4,400		14,400
3.	51,840	5,760	10,000	7,280		17,280
			30,000	13,680		43,680
		8,160				8,160
Total	51,840					51,840

Notes:

- The balance in the CCA Reserve Account at the end of the third year amounting to Rs 13,680 represents the total of amounts set aside as depreciation adjustments. The amounts transferred on account of revaluation adjustments have been eliminated since they represent backlog depreciation.
- Backlog depreciation has arisen because the ultimate cost of the asset is Rs 51,840 out of which Rs. 17,280 should have

been written off each year. However, each year only 1/3 of the value assessed as on that date has been written off. However, backlog depreciation is charged against the CCA Reserve and not Against revenue. As a result the total amount available for replacement of the asset will be must shorter. For instance in the beginning year 1996, the balance in the provision for depreciation is only 12,000. In order to adjust it to Rs 14,400, the difference of Rs 2,400 is charged against CCA Reserve (created out of revaluation adjustments) and not against profit and loss account of the year. The same is true for year 3. Thus, in all backlog depreciation of Rs 8,160 has been met out of CCA Reserve and profits to this extent are not set aside. Hence, sufficient funds will not be available at the time of replacement of the asset. Moreover, even the amounts which have been charged -as Depreciation Adjustments and Depreciation as per HCA, if not invested in outside securities, may get mixed with other assets and may not be available for replacement for the asset

Cost of sales adjustment (COSA) CCA method is based on this important principle that current cost must be matched against current revenue for determining the operating profit or loss. The amount of sales is the current revenue and hence no adjustment is required in its figure. However, items which enter into the computation of cost of sales such as, raw materials consumed or finished goods sold, have to be taken at the present value at which these would have to be replaced if consumed or sold. The difference in values is termed as cost of sales adjustment which is debited, before deriving the operating profit to Profit and Loss Account and credited to Current Cost Accounting Reserve Account

Illustration 14.14 From the following information calculate the Cost of Sales under historical and Current Cost Accounting Systems.

Opening stock of raw materials on 1-1-93 (1,000 tonnes @ Rs 30 per tonne)	Rs 30,000
Purchases during 1993	NIL
Materials consumed during 1993	800 tonnes
Price of raw materials on Jan. 1, 1993	Rs 35 per tonne
Average price during 1993	Rs 40 per tonne
Price of raw materials on Dec. 31, 1993	Rs 45 per tonne

Solution

	Rs.
Historical Cost Accounting System	
Cost of sales (800 tonnes × Rs 30)	24,000
Closing stock (200 tonnes × Rs 30)	6,000
Current Cost Accounting System	
Cost of sales (800 tonnes × Rs 40)	32,000
Closing stock (200 tonnes × Rs 45)	9,000

The increase in Stock of Rs 3,000 in CCA method over Historical Cost basis will be credited to Current Cost Accounting Reserve. The closing stock in Balance Sheet will be shown at Rs 9,000.

The Cost of Sales Adjustment amounting to Rs 8,000, (e.g. Rs 32,000 - Rs 24,000) will be charged to Profit and Loss Account and credited to Current Cost Accounting Reserve.

Illustration 14.15 From the following information calculate the Cost of Sales Adjustment.

Particulars	H.C.A. Rs.	Index of goods
Stock as on 1.1.1993	4,000	180
Purchases during 1993	12,000	198
	16,000	(Average)
Closing stock as on 31.12.1993	5,000	220
Historical cost of sales	11,000	

Solution

COST OF SALES UNDER CCA METHOD

	Rs.
Opening stock as on 1-1-1993	4,400

Add : Purchases during 1993 (Note 2)	12,000
Total average current cost of goods available for sale	16,400
Less : Closing stock as on 31-12-1993 (Note 3)	4,500
Average current cost of sales	11,900

The historical cost of goods sold is Rs 11,000. Hence, Rs 900 is "cost of sales adjustment" which will be debited to Profit and Loss Account, and credited to Current Cost Accounting Reserve Account. Notes:

1. Opening stock must have been sold during the year. Its average current cost has, therefore, been ascertained as follows;

$$4,000 \times 198/180 = \text{Rs. } 4,400$$

2. Sales and purchases are presumed to have been made evenly throughout the year since purchases are at average current cost, no adjustment is required.
3. In order to determine the average current cost of goods sold, average current cost of closing stock has to be deducted from the average current cost of goods available for sale. The average current cost of closing stock has been determined as follows :

$$5,000 \times 198 \div 220 = \text{Rs } 4,500.$$

Illustration 14.16 From the following information, calculate the "cost of sales adjustment".

	H.C.A. Rs	Index of goods
Opening stock of materials as on 1-1-93	10,000	200
Purchases of materials	80,000	
Closing stock of materials as on 31-12-93	14,100	235

(when this purchase was made)

Price index as on 31 -12-1993 was 240. You may presume that material are consumed uniformly throughout the year generally a month after the date of individual purchases. Rise in prices is also uniform throughout the year.

Solution

COST OF MATERIALS CONSUMED UNDER CCA METHOD

	Rs.
Stock as on 1 -1 -93 (Note 1)	11,000
Purchases (Note 2)	88,000
Current average cost of materials available for use	99,000
Less : Current average cost of closing stock (Note 3)	13,200
Cost of materials consumed	85,800

Cost of materials consumed as *per* HCA method comes to Rs 75,900 (i.e., Rs 10,000 + Rs 80,000 -Rs 14,100). The balance of Rs 9,900 is "cost of sales adjustment". This amount would be debited to Profit and Loss Account and credited to Current Cost Accounting Reserve.

The closing stock under CCA method would be shown in the Balance Sheet at Rs 14,400 (i.e., 14,100 × 240/235). The excess of Rs 300 would be credited to current cost accounting reserve.

Working Notes:

1. Current Average cost of opening stock has been ascertained as follows:

$$10,000 \times 220^* \div 200$$

$$*1/2 (200 + 240)$$

2. It has been stated in the question that price rise and consumption of materials has been uniform throughout the year.

The price index in the beginning of the year was 200 while at the end of the year it was 240. There was an increase of 40 points or 20% during the year. Materials were purchased and consumed uniformly throughout the year and price level also increased uniformly. It would, therefore, be advisable to add 10% (i.e., 1/2 or

20%) to the cost of purchases in order to determine current average cost of purchases, as shown below

$$80,000 + [10 \div 100] \times 80,000 = 88,000$$

3. Current average cost of closing stock has to be deducted from the total current average cost of goods available for sale in order to determine current average cost of materials consumed. This has been done as follows :

$$14,100 \times 220/225 = 13,200$$

Cost of sales adjustment is also required to be done for other items which enter the cost of production (except depreciation) such as wages, factory overheads, etc. For example, if wages and factory overheads incurred amounted to Rs 20,000 during a period and it is estimated that on an average there has been a 10% increase in the rates for these items, a sum of Rs 2,000 (i.e., 10% of Rs 20,000) would be taken as COS 4. The amount will be charged to Profit and Loss Account and credited to Current Cost Accounting Reserve.

Monetary working capital adjustment (MWCA) Due to increase in prices, additional monetary working capital is required for efficient and profitable operation of the enterprise. The term monetary working capital refers to the aggregate of accounts receivable and prepayments less accounts payable and accruals. Current cost accounting ensures, this through the medium of a "Monetary Working Capital Adjustment." The additional net monetary working capital required purely on account of increase in the price levels (and not on account of increase in scale of operations) is provided for by charging to the Profit and Loss Account with such increase and crediting the Current accounting Reserve.

Illustration 14.17 From the following information, as per HCA method, compute the monetary working capital adjustment under CCA method:

Particulars	Jan. 1, 1996	Dec. 31, 1996
	Rs.	Rs.
Accounts receivable	20,000	36,000
Accounts payable	11,000	18,400
Monetary working capital	9,000	17,600
Price index for materials	200	230
Price index for finished goods	150	180

Solution

In order to determine MWCA, it will be necessary first to find out the amount of increase in monetary working capital on account of increase in volume of business. This should be done by eliminating the effects of change in price levels in the amounts of receivable and payables. The amounts of receivables and payables have been compared for this purpose by adjusting their figures on the basis of average price indice as shown below :

Particulars	Jan. 1, 1996		Dec. 31, 1996	
	(a) Accounts receivable $20,000 \times 165/150$	22,000	$36,000 \times 165/180$	3,000
(b) Accounts payable $11,000 \times 215/200$	11,825	$18,400 \times 215/230$	7,200	
(c) Monetary working Capital [(a) - (b)]	10,175		5,800	

The increase in monetary working capital on account of increase in volume of business is Rs 5,625 (i.e., Rs 10,175 - Rs 4,550). However, the actual increase in monetary working capital as shown by HCA method comes to Rs 8,600 (i.e., Rs 17,600 - Rs 9,000). The excess of Rs 2,975 (i.e., Rs 8,600 - Rs 5,625) representing excess working capital

required is "Monetary Working Capital Adjustment". The amount would be charged to Profit and Loss Account and credited to "Current Cost Accounting Reserve".

Gearing adjustment Finally, under the Current Cost System, there is also a "Gearing Adjustment". This is necessary because a part of the net operating assets are financed by borrowings which are to be repaid in the same monetary amount irrespective of changes in prices. The other adjustments referred to in sub-paragraphs (ii) to (iv) above, and which cover the impact of price changes on the assets for the purpose of determining the profits, must, therefore, be appropriately reduced to reflect the net adjustment as applicable only to shareholders' funds. This is done by adding back a proportionate amount calculated as a "Gearing Adjustment".

For the purpose of gearing adjustment, the term "Shareholders' Funds" refers to all funds belonging to the shareholders on the basis of current cost accounting. While the term, "Borrowings" refers to "Net Borrowings," representing the excess of :

- (a) the aggregate of all liabilities and provisions fixed in monetary terms (including convertible debentures and deferred tax but excluding proposed dividends) other than those included within monetary working capital and other than those which are, in substance, equity capital :

Over

- (b) the aggregate of overall current assets other than those subject to a cost of sale adjustment and those included within monetary working capital.

Examples of items falling in category (a) are debentures, loans, provisions for tax, etc. While items falling in category (b) are cash and bank balances and marketable securities.

Since the total operating capital comprises net borrowings and equity funds, the gearing adjustment can be made on the basis of the following formula :

$$\text{Gearing Adjustment} = \frac{B}{B + S}$$

where : B = Net Borrowings; S = equity funds.

It will be appropriate to use 'average gearing ratio' for gearing adjustment. The average gearing ratio may be obtained by taking the average of the gearing ratios in the beginning and at the end of the accounting period.

Illustration 14.18 From the following information, calculate the amount of "Gearing Adjustment" in case of a company which has a capital mix of 40% debt and 60% equity.

	Rs.
Depreciation adjustment	10,000
COSA	5,000
MWCA	5,000
	20,000

Solution

Since the amount of debt content is 40% of the total capital employed, a sum of Rs 8,000 (*i.e.*, 40% of Rs. 20,000) is of "Gearing Adjustment". This amount will be debited to "current cost accounting reserve", and credited to 'profit and loss account'. In other words, only a sum of Rs 12,000 (*i.e.*, shareholders' share) will be charged to Profit and Loss Account and credited to Current Cost Accounting Reserve on account of the three adjustments referred to in the question.

Illustration 14.19 Following are the Final Account of A Ltd. for 1995 and 1996:

PROFIT AND LOSS ACCOUNT					
Particulars	1995	1995	Particulars	1995	1996

	Rs.	Rs.		Rs.	Rs.
Materials consumed	7,000	9,000	Sales	20,000	25,000
Excise duty	2,000	3,500	Other income	1,000	500
Manufacturing Exp.	3,000	4,000			
Other expenses	1,000	2,000			
Depreciation	1,000	1,200			
Provision for tax	3,500	2,900			
Profit	3,500	2,900			
	21,000	25,500		21,000	25,000

BALANCE SHEET

Liabilities		1995	1995	Assets	
	Rs.	Rs.		1995	1996
	Rs.	Rs.		Rs.	Rs.
Share capital	4,000	4,000	Fixed Assets :		
Profit and Loss A/c	3,500	2,900	Cost	12,000	15,000
Loan	8,500	7,700	Depreciation	4,000	5,200
Trade creditors	2,000	2,500		8,000	9,800
Provision of Tax	3,500	2,900	Inventories :		
			Raw material	2,000	3,000
			Finished goods	1,000	1,200
			Trade debtors	4,000	5,000
			Cash	6,500	1,000
	21,500	20,000		21,500	20,000

Additional Information:

- Fixed assets costing Rs 12,000 were acquired by the company in 1985 when the price index was 100. The price index in respect of was 200 at the end of 1995 and 250 at the end of 1996. Fixed assets costing Rs. 3,000 were acquired during the year. The company expects the life of the fixed assets as 20 years in each case and would prefer to charge depreciation according to fixed instalment method.
- During 1996 the prices of materials, finished goods increased by 40% while the manufacturing costs increased by 20%.
- The value of stock of finished goods on current cost basis was Rs 1,400 and Rs 1,800 on 31-12-1995 and 31-12-1996 respectively. The value of stock of raw materials, as per current cost basis, amounted to Rs 2,400 and Rs 3,600 respectively on the above two dates.
- Stock of raw materials and finished goods are valued on *FIFO* basis.

You are required to prepare the Profit Statement and the Balance Sheet of the company as per *CCS Method*.

Solution

ADJUSTMENTS REQUIRED

Current Cost of Fixed Assets as per changes In price level :		Rs.
(a) As on 31st December, 1995		
Present cost	12,000 × 200/100	24,000
Less: Depreciation for six years on straight line basis (life being 20 years)		3,000
		21,000
Less: Amount shown in balance sheet as on 31-12-1995		5,000
Credit to current cost accounting reserve		16,000
(b) As on 31st December, 1996 :		

Present cost of assets as on 31st Dec., 1996 : $12,000 \times 250/100$		30,000
Present cost of assets acquired during the year (Presuming half the increase in price applies $3,000 \times 250/225$)		3,333
		33,333
<i>Less</i> : Depreciation for 7 years on 30,000 (i.e., $30,000 \times 7/20$)	10,500	
For half year on Rs 3,333 (i.e., $3,333/40$)	83	10,583
		22,750
<i>Less</i> : Amount shown in the Balance sheet as on 31st December, 1996		9,800
Credited to current cost accounting Reserve		12,950
(ii) Depreciation for 1996		
Depreciation on current cost of assets in the beginning of the year Rs 2,400/20		1,200
Depreciation for half the year on increase in current cost of the assets during the year 6,000/40		150
Depreciation on current costs of assets acquired during the year 3,333/40		83
		1,433
Depreciation charged in accounts for 1996	1,200	
Additional depreciation to be charged	233	
(iii) Increase in value of inventories	1995	1996
Value of finished goods (as given)	1,400	1,800
Raw materials (as given)	2,400	3,600
	3,800	5,400
Value as per balance sheet	3,000	4,200
Credit to current cost account reserve	800	1,200
(iv) Cost of Sales Adjustment		
Purchases as per accounts given for 1996 Materials consumed		9,000
<i>Add</i> : Closing stock of materials		3,000
		12,000
<i>Less</i> : Opening stock of materials		2,000
Purchases		10,000
<i>Add</i> : Increase by 20% (Half of total in the year)		2,000
		12,000
<i>Add</i> : Opening stock at current values		2,400
		14,400
<i>Less</i> : Closing stock at current values		3,600
Cost of materials consumed at current cost		10,800
<i>Less</i> : Amount charged in profit and loss account of 1996		9,000
Increased debit required in respect of materials		1,800
<i>Add</i> : Increase of 10% (half the increase) in manufacturing charges during the year		400
Cost of sales adjustment		2,200
(v) Monetary Working Capital Adjustment		
	1995	1996
Trade debtors	4,000	5,000
Trade creditors	2,000	2,500
Monetary working capital	2,000	2,500

Price of finished goods and materials increased by 40% during 1996. In order to ascertain the effect of price changes the volume of increase will have to be found out by adjusting the opening and closing balances on average movement of prices

		1995		1996
Trade debtors	$\frac{4,000 \times 120}{100}$	4,800	$\frac{5,000 \times 120}{140}$	4,286
Trade creditors	$\frac{2,000 \times 120}{100}$	2,400	$\frac{2,500 \times 120}{140}$	2,143
		2,400		2,143

The monetary working capital has decreased on account of volume changes by Rs 257 (*i.e.*, Rs 2,400 - Rs 2,143) while the actual increase is Rs 500 (*i.e.*, Rs 2,500 - Rs 2,000).

Hence, Monetary Working Capital Adjustment comes to Rs 757.

(vi) **Gearing Adjustment**

	1995	1996
(a) Net borrowings :	Rs.	Rs
Loans	8,500	7,700
Provisions	3,500	2,900
	12,000	10,600
Less : Cash balance	6,500	1,000
	5,500	9,600
(b) Shareholders' funds :	Rs.	Rs.
Share capital	4,000	4,000
Profit and Loss A/c	3,500	2,900
Current cost accounting reserve:		
Increase in value of fixed assets	8,800	12,950
Increase in value of inventories	800	1,200
	17,100	21,050

(*Additional Depreciation charge, COSA and MWCA will not affect the shareholder's funds since on the one hand they will decrease Profit and on the other increase Current Cost Accounting Reserve).

(c) Total of (a) and (b)	22,600	30,650
Percentage of (a) to (c)	24.3	45.6
(d) Average of 24.3 and 45.6 = 34.95 or 35%		
(e) Gearing adjustment		
Additional depreciation charge		Rs. 233
COSA		2,200
MWCA		757
Total		3,190
35% of Rs. 3,190		Rs. 1,117
(f) Current cost account reserve as on 31.12.1996		
Increase in the value of fixed assets		Rs 12,950
Additional depreciation charge		233
Inventories		1,200
COSA		2,200
MWCA		757
		17,340
Less : Gearing Adjustment		1,117
		16,223

2. PROFIT AND LOSS STATEMENT (CCA)
For the year ending, 31st December, 1996

			Rs.
	Operating profit after tax as per HCA*		2,900
Add :	Gearing adjustment		1,117
			4,017
Less :	Addl. Depreciation	233	
	COSA	2,200	
	MWCA	757	3,190
			827

(*Since current cost basis is not accepted at present by the taxation authorities for computation of tax liability, provision for tax has been retained at the old figure as shown by historical cost accounts).

BALANCE SHEET (UNDER CCA)

as on 31st December, 1996

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Share Capital	4,000	Fixed Assets	33,333
Profit and Loss A/c	827	Less : Depreciation	10,583
Current cost accounting reserve	16,223	Inventories :	
Loans	7,700	Finished goods	1,800
Trade creditors	2,500	Raw materials	3,600
Provision for tax	2,900	Trade debtors	5,000
		Cash	1,000
	34,150		34,150

Evaluation of CCA System

CCA System, on the whole, has been found to be satisfactory by accountants all over the world. It measures the real profit or loss for the relevant accounting year by taking due care of the inflationary factors. The system will also work well if the prices fall. The CCA technique can also be built into book-keeping system which is not possible in case of CPP technique. Financial statements can, therefore, be prepared under CCA method on regular basis. It also provides for accumulating sufficient funds for replacing of assets by charging depreciation on current values. It may, therefore, be said that CCA is a good system for recording price-level changes.

However, the CCA system does not fully solve the problem of price-level changes on account of the following reasons:

It does not provide adequately for backlog depreciation The CCA system takes due care of the current year's depreciation but fails to provide adequately for backlog depreciation. As already explained, the backlog depreciation is provided under this system by charging against the "current cost accounting reserve", which is a capital reserve. It will be appropriate to charge such depreciation against revenue reserve available for dividend. If this is done, the management can be restrained from disposing of profits which are really required for replacement of assets. **Fails to provide funds for replacement of new types of assets** Depreciation under CCA system is provided on the basis of the current value of the existing assets. Thus, the funds accumulated by way of such depreciation will possibly be sufficient for replacement of the present type of assets. They may not be adequate for replacement of assets which are of a new type and which may be required because of the company's desire to diversify,

Inadequate gearing adjustment No gearing adjustment is done under the CCA method in respect of value of fixed assets and inventories. These assets are also partly financed by loans. It, therefore, seems to be improper not to subject these assets to gearing adjustments.

Materiality factor Materiality factor is a basic accounting principle and, therefore, CCA technique is also no exception to this. This means that a firm should not be required to make a particular adjustment as required under CCA method if it feels that it is rather insignificant. The implication of this suggestion is that each firm should decide for

itself whether any of the adjustments required under *CCA* can be ignored. For example, a firm like oxygen company, which does not use much material, should be permitted to ignore cost of sales adjustments (*COSA*).

Subjectivity element There is too much of subjectivity element in *CCA* method. For example, the valuation process is subject to the discretion and the personal judgment of the managers and there is no single method of valuation. Sandilands Committee also observed, "the process of valuation is inevitably more subjective than the ascertainment of historical cost, in that not only the value placed on an asset, but even the choice of the basis of valuation, is more dependent on the judgment of the valuer than the ascertainment of cost, and less susceptible to verification by reference to independent factual evidence." However, it should be admitted that there can be no logical comparison between *HCA* method and *CG4* method. In case such comparison is desired, it should be with other available accounting techniques for price level changes. *CCA* method gives better results than all such other techniques. **Ignores gains or losses on monetary items** *CCA* method ignores purchasing power gains and losses on the monetary items of the firm. Such gains and losses are in the nature of cost of holding monetary assets and liabilities during a period of changing price levels. They are of immense importance to companies whose assets and liabilities are mostly monetary in nature. Such companies would gain or lose in terms of purchasing power very heavily on the monetary balances in periods of changing price levels.

Variations in accounting methods The *CCA* method is based on this presumption that firms use uniform accounting methods and practices. It also assumes that firms maintain plant registers on uniform basis. However, this is not true in actual practice. The accounting methods and practices, maintaining of plant registers differ from firm to firm. Moreover, in many cases, the plant registers are either incomplete or fail to provide adequate information required for valuation purposes.

On account of the above limitations of the *CCA* system, many accountants have begun doubting the capacity of the system to depict the true financial position of business during periods of changing price levels. The following remark of Professor Baxter correctly explains the dilemma faced by the accountants, "...because of inflation the old pattern must change abruptly. Accountants have been ordered to take a great leap forward. They are being pressed to bring in a big reform for which their tradition and training fit them poorly. They are to choose between strange concepts and learn novel techniques. For comparability, they must squeeze the same reform on to all types of businesses. They are being exhorted to hurry, yet they know that a false move will do much harm to business, to investors and to their own profession. Small wonder they are rattled and rebellious."

Hybrid Method

Recently some authorities have suggested another method which is essentially a compromise formula between *CPP* method and *CCA* method. According to this method the adjustments of fixed assets and inventories are to be made with reference to specific indices in place of a general index as is the case under *CPP* method. Besides this, purchasing power gains and losses in respect of monetary items are also considered which are ignored under *CCA* method.

Advocates of this method argue that by combining these two methods, the advantages of both can be obtained.

The method, on the face, appears to be a satisfactory compromise formula but its acceptance may prove difficult because of theoretical objections against such a compromise. Moreover, the method is also subject to the limitations of both *CCA* and *CCP* methods.

The method is still in its evolutionary stage and suggestions varying in nature and implications would continue to be made in the coming years. It will take a long time before a set of well defined procedures and guidelines is developed. The method cannot, therefore, be recommended for practical application at the present moment.

PRESENTATION OF PRICE LEVEL ADJUSTED ACCOUNTS

There is no consensus as regards the presentation of financial information reflecting price level changes. Some advocate the preparation of the primary financial statements after giving due effect to the price level changes, while others suggest preparation of financial statements on Historical Cost Basis and reflecting the effects of price level changes only by means of supplementary statements. The International Accounting Standards Committee has recommended the furnishing of information regarding price level changes on a supplementary basis unless the primary financial statements present information, reflecting changes in price levels. The committee has further observed that

such enterprises as are not required to and do not present information reflecting the effects of the changing prices either in their primary financial statements or on a supplementary basis should disclose this fact. In most countries since accounts adjusted as per price level changes are not acceptable to tax authorities, the accounts are generally prepared on Historical Cost Basis and information regarding effects of price level changes are given by means of supplementary financial statements. *SSAP-16* issued by the Institute of Chartered Accountants in England and Wales also provides for current cost information to be included in annual financial statements in addition to historical cost information.

USA AND PRICE-LEVEL ACCOUNTING

The Financial Accounting Standards Board was established U.S.A. in 1972. The *FSAB* has issued a number of statements of accounting standards dealing primarily with specific problems. In October 1979, it issued a statement No. 33 entitled "Financial Reporting and Changing Prices" popularly known as Financial Accounting Standard 33 (*FAS-33*). The standard requires companies to compute inflationary effect on profits in two different ways : (i) constant dollar method, and (ii) current cost accounting method. The first method adjusts inventory costs and depreciation for changes in the consumer price index since the related assets were purchased. The second method adjusts these key items for price changes of specific assets that a company usually holds. However, this information has to be given only as a supplementary information.

At the time of issue of *FAS : 33* it was mentioned that the *FASB* will undertake a comprehensive review of this statement not later than five years after its publication. Consequently the Board issued an Exposure Draft in December 1984, which relates to current cost/constant purchasing power disclosure together with all pronouncements relating to *FAS-33* made from time to time.

However in October 1985, the *FASB* at its meeting decided that the present changing price disclosures required by *FAS-33* should be retained for the time being and the Exposure Draft issued in December 1984, as referred above, will not be issued as a final statement.

INDIA AND PRICE LEVEL ACCOUNTING

The problem of price level changes and its impact on the financial statements has assumed considerable importance in the last few decades. As a matter of fact the very need for method of accounting to take cognisance of changing prices has been often questioned. The choice of an appropriate method has been widely debated. Keeping in view these facts, the Institute of Chartered Accountants of India issued in September 1982 a Guidance Note on Accounting for Changing Prices in the hope that it will stimulate thought and encourage a wider use of the method of accounting for price level changes.

The most relevant aspects of the Guidance Note are as follows :

- (i) The adoption of a system of accounting for changing prices would require a considerable amount of time, money and specialised skills. Also the various techniques are still in the process of development. However, in view of the importance of the subject, it is recommended that enterprises, particularly the large enterprises, may develop the necessary systems to prepare and present this information.
- (ii) Out of the various methods of accounting for changing prices, the Current Cost Accounting Method seems to be most appropriate in the context of the economic environment in India. The periodic revaluations of fixed assets and the adoption of *LIFO* formula for inventory valuation are partial responses to the problem of accounting for changing prices. Current Purchasing Power Accounting, though simple to apply, does not ensure the maintenance of the operating capability of an enterprise. Current cost accounting, on the other hand, is a rational and comprehensive system of accounting for changing prices, as it considers the specific effects of prices on individual enterprises and thus ensures that profits are reported only after maintaining the operating capability. However, the introduction of a full-fledged system of Current Cost Accounting on a wider scale in India will inevitably take some time. During this transitional phase, periodic revaluations of fixed assets along with the adoption of *UFO* formula for inventory valuation would reflect the impact of changing prices substantially in the case of manufacturing and trading enterprises.
- (iii) Adequate data base has presently not been developed in India for accounting for changing prices. Every

¹SSAP 16.

enterprise, therefore, may have to select the price indices depending on its own circumstances. The detailed price indices published in its monthly bulletins by the Government of India can be adopted in a number of cases. There is no doubt that further steps will have to be taken for the timely publication of statistical information required by various industries for the implementation of accounting for changing prices.

- (iv) Considering the importance of the information regarding the impact of changing prices it is recommended that while the primary financial statements should continue to be prepared and presented on the historical cost basis, supplementary information reflecting the effects of changing prices may also be provided in the financial statements on a voluntary basis, at least by large enterprises.

Since the presentation of statements adjusted for the impact of changing prices is voluntary, the enterprises may or may not get this information audited. However, the audit of such statements would enhance their credibility.

- (v) Apart from its utility in external reporting, accounting for changing prices may also provide useful information for internal management purposes. Accounting information system is designed primarily to provide relevant information to various levels of management with a view to assist in managerial decision making, control and evaluation. However, in periods of rapid and violent fluctuations in prices, the information provided by historical cost-based accounting system may need to be supplemented by information regarding the impact of changing prices. The areas in which such information may be of prime importance to management include investment decisions and allocation of resources, divisional and overall corporate performance evaluation, pricing policy, dividend policy, etc.
- (vi) In countries like the United Kingdom, there have been some reforms in the tax structure in the wake of introduction of accounting for changing prices. Though, the tax legislation in India at present does not give recognition to such an accounting system, even then accounting for changing prices, would be useful for generating relevant information for internal and external decision making.

There is no denying the fact that inflation has come to stay. It is, therefore, the responsibility of the business as well as the government and professional bodies to take the bold step of making a positive recommendation regarding providing the shareholders and other concerned with reliable information disclosing the way inflation really hits the profits. The system recommended should be simple, suitable to Indian conditions and duly recognised by the government.

TEST QUESTIONS

Objective type

1. State whether each of the following statements is 'True' or 'False'.

- (i) Financial statements prepared according to conventional accounting system fail to reflect current economic realities.
 - (ii) The terms Price Level Accounting and Inflation Accounting are synonymous.
 - (iii) CPP Method mixes 'Holding' and 'Operating' gains.
 - (iv) Conversion factor in CCP Method is used for restatements of historical figures in terms of current price.
 - (v) General Price level gain or loss represents gain or loss on monetary items under CPP Method.
 - (vi) Current Cost Accounting Method has been finalised by issue of SSAP-16.
 - (vii) Under CCA Method, fixed assets are shown at their depreciated original costs.
 - (viii) MWCA is done under CCA Method for making provision for adequate depreciation on the replacement cost of the asset.
 - (ix) No Gearing Adjustment is necessary in case the entire operating assets are financed by owners' fund.
- [Ans. (i) T, (ii) F, (iii) F, (iv) T, (v) T, (vi) T, (vii) F, (viii) F, (ix) T.]

2. Fill in the blanks.

- (i) The technique of accounting by which financial statements are restated to reflect changes in the general price level is termed as...

¹ In an empirical study conducted in India covering 80 companies it was found that only 11% were supplying inflation adjusted information while the remaining 89% were preparing financial statements based on historical cost only. Among the companies which reported inflation adjusted information, around 4/5th were found to be using CCA method. The rest were using some sort of replacement cost variant giving inflation adjusted information. (Porwal & Mishra. *Inflation Accounting in a Development Economy*, Allied, 1985).

- (ii) A mixture of *CPP* and *CCA* Methods is termed as Method.
 - (iii) Item whose amounts are fixed by contract in terms of monetary units, are called...
 - (iv) Holding gains refer to the gain due to difference between the current value of an asset and its...
 - (v) An excess over a period of the current value of output sold over and above its current cost is termed as...
 - (vi) *CCA* Method is as a result of the recommendation of... Committee.
 - (vii) *COSA* and *MWCA* are both subject to...Adjustment.
- [Ans. (i) Price Level Accounting, (ii) Hybrid, (iii) Monetary Items, (iv) original cost, (v) Operating Income, (vii) Sandilands, (viii) Gearing.]

Essay type

1. State the recommendations of Sandiland's Committee for a basis of financial reporting in times of inflation. Discuss the concept of 'Current Cost Profit' in this context. How the various items of assets and liabilities will be restated for the purpose of Balance Sheet under Current Cost Accounting.
2. "Owing to change in purchasing power of money, the balance sheet figures, if based on historical cost, cannot give a true and fair view of the affairs of business," Explain.
3. Briefly discuss the salient features of 'SSAP-16' entitled "Current Cost Accounting".
4. "If changes in the general price level are beyond the control of management of any individual company, why should information regarding impact of price level changes on the economic performance of the company be of interest to management". Discuss.
5. What is relevance of "Accounting for Inflation"? Discuss the relative merits of the particular methods which have been developed in recent years to correct the distortion in accounting profits from a persistent and at items "run away inflation".
6. (a) What approaches have generally been recommended for dealing with the problems of changes in the purchasing power of money? Which one is the best? Give reasons in brief.
(b) Explain with the help of suitable example how current cost be shown in both Income Statement and Balance Sheet under *LIFO* Inventory Method.
7. What is the replacement or current cost accounting? Discuss its applicability in the highly volatile situation in an economy. (CA Final, May, 1993)
8. Write short note on :
 - (a) Inflation accounting method. (CA Final, Nov., 1993)
 - (b) Current Cost accounting method. (B.Com. Hons. Delhi 1991, CA Final, Nov., 1987)
 - (c) Current Purchasing Power Accounting. (CA Final, May, 1989)
 - (d) Cost of Sales Adjustment. (B.Com., Hons., Delhi, 1988)
 - (e) Holding and Operating Gains. (B.Com., Hons. Delhi, 1988)
 - (f) Monetary and Non-monetary Items.
 - (g) Monetary working capital adjustment (CA Final Nov., 1997)
 - (h) Financial working capital adjustment (CA Inter, Nov., 1995)

[Hint : (h) According to this concept, where capital is defined in terms of monetary terms, the profit means the increase in nominal money capital over the period. When profit is defined in terms of constant purchasing power units, profit means the increase in purchasing power of the capital invested during the period. Thus, only the part of the prices of assets which is in excess of increase in general level prices is regarded as profit. The rest of the increase is treated as capital maintenance adjustment and hence is considered as part of equity.)

PRACTICAL PROBLEMS

CPP Method

1. From the following information restate the amount of sales in terms of 1995 indices :

Years	Unadjusted Sale Rs.	Average Price Index
1993	10,00,000	80
1994	12,00,000	100
1995	13,80,000	120

The Price Index at the end of 1995 is 130.

[Ans. Restated sales Rs. 16,25,000; Rs. 15,60,000; Rs. 14,95,000]

2. Following is the abridged Income Statement of A Ltd., for the year ending 31st December, 1995 prepared according to Historical Cost Accounting System :

		Rs.
Sales		13,80,000
Less : Depreciation	2,70,000	
Other Expenses	9,00,000	11,70,000
		2,10,000

Depreciation is charged by the company on building purchased in 1985 for Rs. 45 lakhs when the price level index was 65. It is being depreciated by Rs. 2,75,000 every year. Other expenses have been paid uniformly throughout the year. The price level index was 120 in the beginning of 1995 and 140 at the end of 1995.

You are required to restate the income statement according to CPP method.

[Ans. Net Loss Rs. 20,000]

[Hint. All items are to be converted at average price index of 130.]

3. Following information has been disclosed by the Balance Sheet of a firm :

	Rs.
Monetary Assets	10,000
Monetary Liabilities	5,500

The price index at the time monetary assets were acquired, liabilities were created, was 100. It stands at 130 now. Presuming that there has been no change in the amount of assets and liabilities, calculate the "general purchasing power gain or loss"

[Ans. General Purchasing Power Loss Rs. 350]

4. Following information has been extracted from the financial statements of a company

	Rs.	Rs.
Plant and machinery	36,000	
Less : Accumulated depreciation	6,000	30,000
Building	1,00,000	
Less : Accumulated depreciation	40,000	60,000
		90,000

The plant was purchased when the general price index was 120 and building was acquired when it was 100. Restate the amount of the assets when the present price index is 150.

[Ans. Plant Rs. 37,500; Building Rs. 90,000]

5. H Company held shares in X Company which it bought for Rs. 10,000 in 1991 when index of the general level of prices stood at 110. At the end of 1994, the market price of the shares was Rs. 8,000 and the index 130. At the end of 1995, the market price of the shares was Rs. 9,000 and index 142.2.

- Calculate the CPP value of shares at the end of 1994 and 1995.
- Under CPP accounting what gain or loss would be shown in respect of the shares during 1994-95?
- What, in fact, was the gain or loss in purchasing power in respect of the shares during 1995?

[Ans. (i) CPP value (a) 1994; Rs. 12,000, (b) 1995; Rs. 13,200, (ii) Gain or Loss, (a) in terms of 1994, (Loss) Rs. 4,000 (b) in terms of 1995, Rs. 4,200, (iii) Gain Rs. 200 in terms of 1995.]

6. From the following information restate the cost of goods sold according to HCA and CPP Methods presuming that the firm is using FIFO method for pricing its inventories :

	Rs.
Inventories on January 1, 1996	12,000
Purchases during 1996	14,000
Inventories on 31st December, 1996	3,400

The above information has been given on Historical Cost basis. The price index in the beginning of 1996 was 100 while at the end of 1996, it was 190. The inventory on 31st December, 1996 consists of purchases made when the price index was 170. The purchases were made uniformly during the year.

[Ans. HCA Method Rs 11,800, CPP Method Rs 16,560]

7. From the following information calculate the cost of goods sold under HCA and CPP Methods presuming that the firm is following LIFO method for pricing its inventories :

	Rs.
Inventories on January 1, 1996	2,400
Purchases during 1996	21,000
Inventories on 31st December, 1996	5,700

The general price index was 100 when the beginning inventory was acquired. The ending inventory consists of purchases made when the general price index was 110. The general price index at the end of 1996 was 180. The purchases were made uniformly throughout the year.

[Ans. Cost of sales: HCA: Rs 17,700; CPP Rs 21,600]

8. The following is the comparative balance sheet of a company on historical cost accounting Basis;

31st December, 1995		31st December, 1996	
30,000		Fixed Assets	30,000
10,000	20,000	Less : Accumulated depreciation	11,000
9,000	Stock	18,000	19,000
10,000		Debtors	25,000
8,000	27,000	Cash	5,000
	47,000		48,000
	35,000	Shareholders' Equity	40,000
	12,000	Creditors	27,000
	47,000		67,000

The profit and loss statement for the year ended 31st December, 1996 is as follows:

	Rs.	Rs.
Sales		40,000
Less : Cost of Sales	34,000	
Depreciation	1,000	35,000
Profit		5,000

Notes on the accounts:

- (a) Sales were made on credit.
- (b) Cash received from debtors Rs 20,000.
- (c) Purchases of stock on credit Rs 43,000.
- (d) Cash payments made to suppliers Rs 18,000.
- (e) The company maintains its stock account on the FIFO basis.

- (f) All transactions may be assumed to have occurred to have occurred evenly throughout the year,
 (g) Fixed assets were acquired on 1st January, 1980, General price areas follows :

Year	Price Index
31st December, 1979	60
31st December, 1995	95
31st December, 1996	105

You are required to :

- (i) Prepare the balance sheets as at 31st December, 1995 and 1996 in terms of current purchasing power (31st Dec., 1996).
 (ii) Prepare the profit and loss statement for the year ended 31st December, 1996 in terms of current purchasing power (31st Dec., 1996) :

[Ans. (i) 1995 : Total of Balance Sheet Rs. 64,842, Shareholders' equity Rs. 51,570]

(ii) 1996 : Total of Balance Sheet of Rs. 82,150; Shareholder's equity Rs. 55,150;
 Profit (after adjusting monetary loss of Rs. 482) Rs. 3,700

CCA Method :

9. From the following data, calculate "Cost of Sales Adjustment".

	HCA Rs.	Price Index
Stock as on 1.1.1996	10,000	180
Purchases during 1996	30,000	198
Stock as on 31.12.1996	12,500	220

[Ans. COSA Rs. 2,250]

10. From the following calculate the "Monetary Working Capital Adjustment" as required under Current Cost Accounting System :

Items	31st Dec., 1995 Rs.	31st Dec., 1996 Rs.
Inventories	2,75,000	3,05,000
Accounts receivable	2,25,000	40,000
Cash balances	30,000	40,000
Advances for supply of materials	50,000	63,250
Accounts payable	1,25,000	1,61,000

The prices of materials increased by 15% and those of finished goods by 10% during 1996

[Ans. Rs. 1,75,000]

11. Calculate the "Cost of Sales Adjustment" (COSA) from the following under CCA method :

	Rs.	Historical Cost	Index
Opening Stock		50,000	100
Purchases		1,80,000	120
Total Goods	2,30,000		(Average)
Less : Closing Stock	84,000		
Cost of Sales	1,46,000		

(ICWA Unit June 1988)

[Ans. Rs. 22,000]

12. Calculate the Monetary Working Capital Adjustment (*MWCA*) from the following :

	Opening	Closing
Debtors	Rs. 5,000	Rs. 7,000
Creditors	4,000	4,600
Index Number	100	120
Average Index for the year	100	120

(*ICWA Final, June, 1993*)

[**Ans.** Rs. 300]

13. Calculate the amount of depreciation under 'Current Cost Accounting' (*CCA*) method for each of the four years as well as the backlog depreciation for a certain item of the asset from the following details.

Cost of Machine	Rs. 40,000
Estimated life	4 years
Residual value	Nil
Inflation factor	10% p.a.

Assume straight line method of depreciation

(*ICWA Final, June 1988*)

[Ans.]	Year-end	Dep. Adj.	Backlog Dep.	Addl. Depreciation
	1	1,000	Nil	1,000
	2	2,100	1,100	3,200
	3	3,310	2,420	5,730
	4	4,641	3,993	8,934]

14. From the following comparative balance sheet of *ABC Ltd.* as prepared according to Current Cost Accounting Method, you are required to calculate the "Gearing Ratio"

COMPARATIVE BALANCE SHEET

<i>Liabilities</i>	1995	1996	<i>Assets</i>	1995	1996
	Rs.	Rs.		Rs.	Rs.
Share Capital	50,000	50,000	Fixed Assets (net)	1,20,000	1,40,000
General Reserve	25,000	30,000	Inventories	50,000	65,000
Current Cost			Account Receivable	80,000	90,000
Accounting Reserve	50,000	60,000	Prepaid Expenses	1,000	1,000
Secured Loans	58,000	88,000	Cash	5,000	7,000
Accounts Payable	50,000	46,000			
Provision for Taxation	15,500	20,000			
Proposed Dividend	7,500	9,000			
	2,56,000	3,03,000		2,56,000	3,03,000

[**Ans.** 36.27 per cent]

15. Following are the balances taken from the balance sheet of *XYLTA*. prepared according to Current Cost Accounting Method. You are required to calculate the "Gearing Adjustment".

	1.1.1995	31.12.1995
Debentures	Rs. 25,000	Rs. 30,000
Bank Overdraft	15,000	20,000
	1.1.1995	31.12.1995
Cash	Rs. 2,500	Rs. 5,000
Paid-up Share Capital	37,500	50,000

¹Baxter W.T. *What Progress on Inflation Guidelines*, Accountant, September 29, 1977, p. 378.

General Reserve	7,500	12,500
The following is the additional information regarding the different adjustments made.		
Cost of sales adjustment		Rs 5,000
Monetary working capital adjustment		3,750
Depreciation adjustment		1,250

[Ans. Gearing Ratio 43.5%, Amount of Gearing Adjustment Rs 4,350.]

16. Following are the summarised final accounts relating to Maheshwari Brothers Pvt Ltd. for the year ending 31st Dec, 1996.

INCOME STATEMENT

		Rs.
Sales		25,000
Less : Cost of Sales :		
Materials consumed	7,500	
Wages	2,500	
Other Manufacturing Expenses	2,500	12,500
Gross Profit		12,500
Less : Selling Expenses	3,000	
Depreciation	2,850	
Interest	1,000	
Administration Expenses	1,900	8,750
Profit before Tax		3,750
Less : Tax		1,500
Profit after Tax		2,250

BALANCE SHEET

Liabilities	1995 Rs.	1996 Rs.	Assets	1995 Rs.	1996 Rs.
Share Capital	10,000	10,000	Plant at Cost	25,000	30,000
General Reserve	5,000	6,250	Less : Dep. at 10% on fixed		
15% Debentures	5,000	7,500	instalment basis	9,500	12,350
Accounts Payable	1,500	2,000		15,500	17,650
Provision for Tax	1,250	1,750	Stock :		
Proposed Dividend	1,000	1,000	Raw materials	1,250	2,000
			Finished goods	2,500	3,000
			Debtors	4,000	5,000
			Cash balances	500	800
	23,750	28,500		23,750	28,500

The following is the additional information supplied to you :

- The prices of plant and machinery have risen to 150% till 31st Dec. 1995 since the establishment of the company. They rose further to 180% on 31st December, 1996.
- The scrap value of plant and machinery is estimated at 5% of the original cost.
- The prices of raw materials have increased by 20% and of finished goods by 20% during 1996.

4. The following are the replacement prices for inventories :

	31st Dec. 1995	31st Dec 1996
Raw Materials	Rs 1,375	Rs 2,250
Finished Goods	3,000	3,750

You are required to restate the Income Statement and Balance Sheet as per CCA method.

[Ans. Loss after Interest & Tax Rs 113.25, B/S Total Rs 40,905]

16. The following information has been extracted from the accounts of W Ltd., prepare under the historical cost convention for 1993.

PROFIT AND LOSS ACCOUNT EXTRACTS 1993

	Rs (In millions)
Turnover	200
Operating Profit	15
Less : Interest Payable	3
Net Profit	12

SUMMARISED BALANCE SHEETS ON 31 ST DECEMBER, 1993

	Rs. (in millions)	Rs. (in millions)
Fixed Assets at cost Less depreciation		60
Current Assets : Stock	20	
Debtors	30	
Bank	2	
	52	
Less : Current Liabilities	30	
Net Current Assets		22
Total Assets Less : Current Liabilities		82
Less : 15% Debentures		20
		62
Capital and Reserves		62

The Company's accountant has prepared the following current cost data :

	Rs (in millions)
Current cost adjustments for 1993 :	
Depreciation adjustment	3
Cost of sales adjustment	5
Replacement cost at 31st December, 1993 :	
Fixed assets, net of depreciation	85
Stocks	21

Required :

- (a) A calculation of the Current Cost Operating Profit of N Ltd. for 1993 and summarised Current Cost Balance

Sheet of the company at 31 st December, 1993 so far as the information permits.

- (b) Calculations of the following ratios from both the historical cost accounts and current cost accounts:-
- (i) Interest cover;
 - (ii) rate of return on shareholders' equity; and
 - (iii) debt/equity ratio
- (c) A discussion of the significance of the ratios calculated under (b) and of reasons for differences between them.

Note : Ignore taxation.

(ICWA Final June 1994)

{Ans. (a) Current Cost Operating Profit Rs 7 millions
Current Cost Balance Sheet (Vertical Form) Total- Rs 108 millions

(b)	HCA	CCA
(i)	5 Times	2.3 Times
(ii)	19.55%	4.5%
(iii)	0.32	0.23]

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CHAPTER 15

HUMAN RESOURCE ACCOUNTING

NEED AND DEVELOPMENT

It is a widely accepted fact that success of any organisation, business or otherwise, to a great extent, depends upon the quality, caliber and character of the people working in it. An organisation having vast physical resources, with latest technology, may find itself in the midst of severer financial crisis in case it does not have right people to manage and conduct its affairs. Thus, inspite of all technological developments, the importance of human resources has in no way diminished. It is unfortunate that even till now accountants have not been in a position, to evolve a generally accepted system to value and record this important asset, viz., the human resources.

The concept of considering human beings as an asset is an old phenomenon. One may recall, in this connection, the importance which emperor Akbar gave to the nine jewels (courtiers). The history of our freedom movement will not be complete without mentioning the names of Shri Motilal Nehru, Mahatma Gandhi, Sardar Vallabh Bhai Patel and several other distinguished freedom fighters. However, no effort was made to assign any monetary value to such individuals in the Balance Sheet of the nation or of the organisation.

The first attempt to value the human beings in monetary terms was made by Sir William Petty as early as 1691. Petty was of the opinion that labour was "the father of wealth" and it must be included in any estimate of national wealth. Further efforts, in this connection, were made by William Far in 1853, Earnest Engle in 1883.

However, the real work on the subject started from 1960, when behavioural scientists vehemently criticised, the conventional accounting practice of not valuing the human resources along with other material resources. As a result, accountants and economists all over the world became conscious of the fact the appropriate methodology and procedures have to be developed for finding the cost and value of the people to the organisation. Over a period of three decades, a number of experts have worked on it and produced certain models for evaluating human resources. The notable among them are Shultz, (1960), William C. Pyle (1967), Flam Holtz (1971, 1972, and 1975), Morese (1973), Lav and Schwartz (1971), Jaggi & Lav (1974), Kenneth Sinclare (1978), etc.

The present chapter deals with some of the important models evolved during the last two decades for valuation of human resources.

CONCEPT OF HUMAN RESOURCE ACCOUNTING

As a result of the various studies conducted by different experts in the areas of accounting and finance, a new branch of accounting known as "Human Resource Accounting" has come into being. This branch of accounting is primarily based on this concept that the traditional practice of treating all expenditure on human capital formation as an immediate charge against the revenue of the period is not consistent with the term accorded to comparable outlays in physical assets. As a matter of fact, the cost incurred on any asset should be capitalised when it is incurred in order to yield future benefits measurable in monetary terms.

The concept of human resource accounting can be better understood if one goes through some of the important definitions given by the competent authors in the accounting field.

The American Accounting Society Committee on human resource accounting defines it as follows:

"Human resource accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties."

Mr. Woodruff Jr. Vice President of R.G. Barry Corporation defines it as follows:

"Human resource accounting is an attempt to identify and report investments made in human resources of an organisation that are presently not accounted for in conventional accounting practice. Basically it is an information system that tells the management what changes over time are occurring to the human resources of the business."

In simple words, human resource accounting is the art of, valuing, recording and presenting systematically the worth of human resources in the books of account of an organisation. This definition brings out three important aspects of human resource accounting :

- (i) Valuation of human resources.
- (ii) Recording the valuation in the books of account.

- (iii) Disclosure of the information in the financial statements of the business.

VALUATION OF HUMAN RESOURCES

Following are the important approaches suggested for valuation of human resources.

Historical Cost Approach

This approach was developed by Brummet, Flamholtz and Pyle. According to this approach, the actual cost incurred on recruiting, selecting, hiring, training and developing the human resources of the organisation are capitalised and written off over the expected useful life of the human resources. The historical cost of human resources in case of this method is thus treated in the same manner as the cost of any other physical asset. Any expenditure incurred for training or development of the human resources increases, the value of human assets like any other physical asset and therefore, capitalised in a similar manner. Amortization of the human assets is also done in a similar manner. In case the human asset expires before the end of the expected service life period, the whole of the amount not written off is charged against the revenue of the year in which such event takes place. In case the useful life is recognised to be longer than the original expected, amortization is appropriately rescheduled.

Merits. The methods has the following merits :

- (i) The method is simple to understand and easy to work out.
- (ii) The method follows the traditional accounting concept of matching cost with revenue.
- (iii) The method can provide a basis for valuing a firm's returns on its investment on human resources.

Limitations. The method suffers from the following limitations :

- (i) The method takes into account only a part of acquisition cost of employee. It does not consider the aggregate value of their potential services.
- (ii) It is difficult to estimate the period over which the human resource will provide service to the organisation. It thus creates problems in determining the amount to be amortized over the year.
- (iii) The value of human assets according to this method goes on decreasing every year due to amortization. However, in reality, the value of human assets increases over time on account of people gaining experience.

Replacement Cost Approach

This approach was developed by Rensis Likert and Eric G. Flamholtz. This approach values the human resources at their present replacement cost. In other words, human resources of an organisation are to be valued on the basis of the assumption, what would cost the firm, if the existing human resources are required to be replaced with others of equivalent talents and experience.

The approach is similar to the historical cost approach mentioned above except that it allows for changes in the cost for acquiring, training and developing the employees in place of taking their historical cost for capitalisation.

Merits. The method has the following merits :

- (i) The approach incorporates the current value of the firm's human resources. Thus, the financial statements prepared according to this approach are more realistic as compared to those prepared under historical cost approach.
- (ii) It is almost impossible to ascertain correct replacement cost of existing human resources, since there can be no complete replacement for them.

Limitations. The method has the following limitations :

- (i) The method is at variance with conventional accounting practice of valuing assets at historical costs.
- (ii) It is almost impossible to ascertain correct replacement cost of existing human resources since there can be no complete replacement for them.
- (iii) There is no objective way for determination of replacement cost. Personal prejudices do work. Moreover there is no foolproof method for verification of replacement cost.

Opportunity Cost Approach

This approach has been suggested by Hekimian and Jones. According to this approach, the value of an employee is determined according to his alternative use. In case an employee has no alternative use, no value will be placed on him. This approach specifically excludes those types of employees who can be hired readily from outside. The approach suggests competitive bidding process for the scarce employees in an organisation. It means that the

opportunity cost is lined with scarcity. The opportunity cost of an employee or a group of employees in one department is calculated on the basis of the offers (bids) by other departments for those employees. This will be clear from the following example.

A company has two departments Sand Y. The amount of capital employed (in physical assets) in department X and Y is Rs 10 lakhs and Rs 5 lakhs respectively. The required rate of return on total capital employed (physical as well as human) is 15%. It is expected that with the employment of a specific group of technocrats, department X can make a profit of Rs 3 lakhs while department Y can make a profit of Rs 2.5 lakhs.

The capitalised value of profit with the technocrats at the rate of 15% comes to Rs. 20 lakhs in case of department X and Rs. 16.67 lakhs for department Y. In case of value of physical assets is deducted from these figures, the value of human resources comes to Rs. 10 lakhs in case of department X and Rs. 11.67 lakhs in case of department Y. Hence, department Y can offer a higher bid for the technocrats as compared to department X.

In terms of salary, department X can offer a salary of Rs 1.50 lakhs (Rs 10 lakhs × 15%) while department Y upto Rs 1.75 lakhs (Rs 11.67 × 15%). Department Y can thus also offer a high salary. Department Y will have the technocrats on account of a higher bid and it will include Rs 11.67 lakhs as its investment in human resources.

Merits. According to the authors of this approach, a bidding process, such as this, is a promising approach towards (a) more optimal allocation of personnel and (b) a quantitative base for planning, evaluating and developing human assets of the firm.

Limitations. This approach has several limitations :

- (i) It has narrowed down the concept of opportunity cost by restricting it to the next best use of the employee within the same organisation.
- (ii) It has specifically excluded from its purview those employees who are not scarce or are not being bid by other department. This is likely to result in lowering morale and productivity of the employees, who are not covered by the competitive bidding process.
- (iii) The total valuation of human resources base on this method may be misleading and inaccurate. This is because a person may be an expert in a particular area and therefore may be useful for one department but useless for another department. Thus, he may be a valuable person for the department he is working and command a high value. However, he may have a lower price in the bid by the other department where his services are not at all required.

Standard Cost Approach

This approach has been suggested by David Watson, According to this approach, standard costs of recruiting, hiring, training and developing per grade of employees are determined year after year. The standard cost so arrived at for all human beings employed in the organisation is the value of human resources for accounting purposes.

The approach is easy to explain and can work as a suitable basis for control purposes through the technique of variance analysis. However, determination of the standard cost for each grade of employee is a ticklish process.

Present Value of Approach

According to this approach, the value of human resources of an organisation is determined according to their present value to the organisation. For determination of the present value, a number of valuation models have been developed. Some of the important models are as follows :

Present Value of Future Earnings Model This model has been developed by Lav and Schwartz (1971). According to this model, the value of human resources is ascertained as follows :

- (i) All employees are classified in specific groups according to their age and skill.
- (ii) Average annual earnings is determined for various ranges of age.
- (iii) The total earnings which each group will get upto retirement age are calculated.
- (iv) The total earnings calculated as above are discounted at the rate of cost of capital. The value thus arrived at will be the value of human resources/assets.
- (v) The following formula has been suggested for calculating the value of an employee according to this model.

$$V_r = \sum_{t=r}^T \frac{I(t)}{(1+R)^{t-r}}$$

where V_r = the value of an individual r years old.
 $I(t)$ = the individuals' annual earnings upto the retirement.
 t = retirement age
 r = present age of the employee
 R = discount rate

Illustration 15.1 From the following details compute the value of human resources of an employee group with an average age of 58 years.

(i) Annual Average Earning of an employee till the retirement age	Rs 20,000
(ii) Age of retirement	60 years
(iii) Cost of capital	10%
(iv) No. of employees in the group	10

Solution

$$\begin{aligned}
 V_r &= \sum_{t=r}^T \frac{I(t)}{(1+R)^{(t-r)}} \\
 &= \frac{20,000}{(1+0.10)^{(60-58)}} + \frac{20,000}{(1+0.10)^{(60-59)}} \\
 &= \frac{20,000}{(1+0.10)^2} + \frac{20,000}{(1+0.10)^1} = 16,528.82 + 18,181.82 = \text{Rs.} 34,710.75
 \end{aligned}$$

Alternatively the value of an employee can be computed with the help of Annuity Table. The present value of an annuity of Re 1 for two years at 10% is 1.736, Hence, the present value of Rs 20,000 for two years comes to $20,000 \times 1.736 = 34,720$. This is almost the same as calculated above.

Since the total number of employees in the group are 10, hence the total value of human resources of this group comes to $34,710 \times 10 = \text{Rs } 3,47,100$.

Limitations. The method suffers from several limitations :

- (1) A person's value to an organisation is not entirely determined by the salary paid to him. A person may like to work at a salary which is less than what he actually deserves. Moreover, salary does not remain constant over a period of time. They tend to change in response to social, political and economic conditions. Hence, they cannot be predicted with precision and accuracy.
- (2) The model ignores the possibility that an individual may leave the organisation for reasons other than death or retirement. Thus, it overstates an employee's expected service life and his future earnings.
- (3) The model does not take into account the changes which people make during their career, from one role to another, at one or more times within the organisation itself. This may result in the changes in their expected future earnings and ultimately the value of human resources.
- (4) The model also ignores other considerations such as seniority, bargaining capacity, skill experience, etc., which may result in payment of higher or lower salaries to employees. Thus, the salaries paid to employees may not really represent the employees real worth to the organisation.

Reward valuation model This model has been suggested by Flamholtz (1971). This is an improvement on 'present value of future earnings model' since it takes into consideration the possibility or probability of an employee's movement from one role to another in his career and also of his leaving the firm earlier, than his death or retirement. According to this model, the ultimate measure of an individual's value to an organisation is his expected realisable value. The realisable value is estimated on the basis of the present worth of the set of future services he is expected to provide during the period he is likely to remain with the organisation. The model suggests a five step approach for this purpose.

1. Determination of the period for which a person is expected to serve the organisation.
2. Identification of 'service states' (*i.e.* roles or posts) that the employee might occupy during his service career including the possibility of his quitting the organisation.
3. Estimation of the probable period for which a person will occupy each possible 'service state' (posts or roles) in future in the organisation.
4. Estimation of the value derived by the organisation when a person occupies a particular position, *i.e.* a service state for the specific time period. Such value can be determined either by multiplying the price of the services (articles) with the quantity of the services (articles) to be rendered (produced) or the income expected to be derived from the services to be rendered.

5. The total value of the services derived by the organisation by different employees or group of employees is determined. The value thus arrived is discounted at a pre-determined rate to get the present value of human resources.

Limitations. The model suffers from nearly all the drawbacks from which the present value of future earnings model suffers. Moreover, it is difficult to obtain reliable data for determining the value derived by an organisation during the period a person occupies a particular position. The model also ignores the fact that individuals operating in a group may have a higher value for the organisation as compared to individuals working independently.

Net Benefit Model This approach has been suggested by Morse (1973). According to this approach, the value of human resources is equivalent to the present value of net benefits derived by the organisation from the service of its employees. The method involves the following steps.

1. The gross value of services to be rendered in future by the employees in their individual as well as their collective capacity is determined.
2. The value of future payments (both direct and indirect) to the employees is determined.
3. The excess of the value of future human resources (as per 1 above) over the value of future payments (as per 2 above) is ascertained. This, as a matter of fact, represents the net benefit to the organisation on account of human resources.
4. The present value of the net benefit is determined by applying a pre-determined discount rate (generally the cost of capital). This amount represents the value of human resources to the organisation.

Certainty Equivalent Net Benefit Model This approach has been suggested by Pekin Ogan (1976). This, as a matter of fact, is an extension of "net benefit approach" as suggested by Morse. According to this approach, the certainty with which the net benefits in future will accrue should also be taken into account, while determining the value of human resources. The approach requires determination of the following :

1. Net benefit from each employee as explained under 'net benefit approach' above.
2. Certainty factor at which the benefits will be available.
3. The net benefits from all employees multiplied by their certainty factor will give certainty equivalent net benefits. This will be the value of human resources of the organisation.

Aggregate Payment Approach This approach has been suggested by Prof. S.K. Chakraborty (1976). As a matter of fact, he is the first Indian to suggest a model for valuation of human resources of an organisation. According to his model, the human resources are to be valued as a group and not on individual basis. Prof. Chakraborty's model for valuation of human resources involves the following steps :

1. All the employees of an organisation are divided in two groups, managerial and non-managerial.
2. The average tenure of the employment of the employees in the group is estimated on the basis of past experience.
3. The average salary of the group is determined on the basis of the salary/wage structure prevalent in the organisation,
4. The value of human resources is now determined by multiplying the average salary of the group with the average tenure of the employees in that group.
5. The value determined under '4' above, is discounted at the expected average after tax return on capital employed over the average tenure period, to ascertain the present value of the estimated future payment. Dr. Chakraborty suggests that the adoption of such a long-term rate will avoid fluctuations in the value of "human asset", from year to year simply due to changing annual rates of return.

Professor Chakraborty has also suggested that the recruitment, hiring, selection, development and training cost of each employee should be recorded separately. This should be treated as deferred revenue expenditure and may be written off over the expected average age stay of the employee in the organisation. The deferred portion, not written off, should be shown in the Balance Sheet of the organisation. If there is pre-mature exit of an employee on account of death, retirement, etc., the balance of the deferred revenue expenditure attributable to that person should be written off against the income of the year of exit itself.

As regards disclosure of accounting information relating to human resource, Professor Chakraborty has suggested

that 'human assets' should be shown under the heading "Investments in the Balance Sheet of an organisation. He has not favoured its inclusion under the heading fixed assets since it would cause problem of depreciation, capital gains and losses, in the event of their exit. Similarly, he has not favoured their inclusion in current assets on the ground that this will not be in conformity with the general meaning of the term.

Total Cost Concept This approach has been suggested by Prof. N. Dasgupta (1978). According to him the various approaches suggested in the previous pages take into account only those persons, who are employed and ignore those who are unemployed. In case the value of human resources of the nation is to be determined, it should be done in a manner that it brings in its purview both employed and unemployed persons. The system should be such that it fits in preparation of a balance sheet, showing the human resources not only of a firm but also of the whole nation.

According to Prof. Dasgupta; the total cost incurred by the individual, the state and the organisation in bringing the individual up to that position in the organisation (in case of a nation making him fit for appropriate employment) should be taken as the value of a person on the day, he starts serving the organisation or becomes fit for appropriate employment. It will include his education, training expenses which he and the state have incurred. The value should be further adjusted by the amount of intelligence (higher or lower which he has). The amount spent by the organisation on recruitment, training, familiarising and developing human beings employed in the organisation should be considered separately. However, it should also be treated as a cost increasing the value of human beings. In case the number is large, the valuation can be done group-wise.

The value determined on the aforesaid manner should be adjusted at the end of each year by the organisation on the basis of his age, seniority, status, performance, experience, leadership, managerial capabilities, etc. The measurement can be done with the help of psychologists and other concerned experts. The revised value would be the value of the employee at the end of the year.

Prof. Dasgupta's model seems to be sound theoretically. However, its practical application may be difficult since it will involve a number of abstract factors, which may not be capable of being expressed in monetary terms precisely and objectively.

RECORDING AND DISCLOSURE IN FINANCIAL STATEMENTS

In the preceding pages, we have explained the various models dealing with the mode of valuation of human resources as an asset. The "present value of future earnings" model, as suggested by Lav and Schwartz, has been found to be most popular model on account of convenience and objectivity. The exponents of human resource valuation models in most cases have not dealt, with the mode of recording and disclosure of the accounting information relating to human resources in the books of account or financial statements of the organisation. This has been left to the discretion of the accounting bodies who have yet to develop a generally accepted basis for valuation, recording and disclosure of human resource accounting information in the financial statements of an organisation. In most cases, the human resource accounting information is given in the form of supplementary information attached to the financial statements.

Prof. N. Dasgupta has suggested in his total cost approach (explained earlier) the following mode for disclosure of human resources in the balance sheet of an organisation.

According to him, the human resources valued as per his model should be shown both on the "assets" as well as "liabilities" sides of the balance sheet. On the assets side, it should be shown after the fixed assets as Human Assets classified into two parts — (i) value of individuals, (ii) value of firm's investment. On the "liabilities" side, it should be shown after the capital as Human Assets Capital by that amount at which it has been shown on the asset side against 'value of individuals'. He has given the following example to clarify his point.

Example. A firm has started its business with a capital of Rs 1,00,000, It has purchased fixed assets worth Rs 50,000 in cash. It has kept Rs 26,000 as working capital and incurred Rs 24,000 on recruitment training and developing the engineers and a few workers. The value of engineers and workers is assessed at Rs 80,000.

The items will be shown in the balance sheet as follows :

BALANCE SHEET			
(INCLUDING HUMAN RESOURCES)			
<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs</i>
Capital	1,00,000	Fixed Assets	50,000
Human Assets Capital	80,000	Human Assets :	

(i) Individuals' Value	80,000
(ii) Value of Firm's Investment	24,000
Current Assets	26,000
	1,80,000

IMPORTANCE OF HUMAN RESOURCE ACCOUNTING

Human Resource Accounting provides useful information to the management, financial analysts and employees, as shown below :

1. Human Resource Accounting helps the management in the decision-making process relating to the following matters.
 - (a) Employment, locating and utilisation of human resources.
 - (b) Transfers, promotion, training and retrenchment of human resources.
 - (c) Planning of physical assets *vis-a-vis* human resources,
 - (d) Evaluating the expenditure incurred for imparting further education and training to employees in terms of the benefits derived by the firm.
 - (e) Identifying the causes of high labour turnover at various levels and taking preventive measures to contain it.
 - (f) Locating the real cause of low return on investment, that is whether it is due to improper or under utilisation of physical assets or human resource or both.
2. A financial analyst is interested in understanding and assessing the inner strength of firm. Such inner strength does not merely depend on the physical assets owned and possessed by the firm. It also depends upon the type of human resources available to the firm. The vigilant, dynamic and responsible management can steer the company well through most adverse and unfavourable circumstances. In case the human resources, specially the managerial resource at the disposal of the firm are impartially and systematically valued and disclosed in the financial statements, it will be a valuable information for persons interested in making long-term investment in the firm.
3. The Human Resource Accounting helps individual employees in improving their performance and bargaining power. It makes each of them conscious of the contribution that he is making towards the betterment of the firm *vis-a-vis* the expenditure incurred by the firm on him.

OBJECTIONS AGAINST HUMAN RESOURCE ACCOUNTING

The following are some of the common objection against Human Resource Accounting :

1. Human being cannot be owned like other physical assets. They, therefore, cannot command any value.
2. Tax laws do not recognise human beings as assets. Hence, human resource accounting remains merely as a theoretical concept.
3. There is no generally accepted model for valuation of human resources. The mode of presentation has also yet to be codified.
4. The valuation of human resources depends on a large number of abstract factors not measurable in precise monetary terms. Hence, the valuation lacks objectivity and preciseness.

The above objections are basically because of human resource accounting being a new concept. The opinion are still to be crystalised. It is yet not less satisfying that the accountants these days have realised that disclosure of human resources in the financial statements "is a must" if they have to show a true and fair view of the state of affairs of the business. In course of time, proper techniques are bound to be developed for valuation of human resources and generally acceptable formats will be evolved by the accountants for disclosure of this vital information in the financial statements of the firm.

HUMAN RESOURCE ACCOUNTING IN INDIA

In India, the financial statements of companies have to be prepared as per the provisions of the Companies Act, 1956. The Act does not provide for disclosure of any significant information about human resources employed in a company except that the companies have to give by way of a note to the Profit and Loss Account, particulars of employees getting remuneration of Rs 6,00,000 per annum or more. However, there is nothing in the Act which prevents a company from giving details about its human resources byway of a supplementary information attached with its financial statements.

In view of the growing importance of human resource accounting, many corporate enterprises in India are voluntarily giving information about their human resources. They number about 15 in all and include many important public sector enterprise viz. Bharat Heavy Electricals Ltd. (*BHEL*), Steel Authority of India Ltd. (*SAIL*), Minerals and Metal Trading Corporation of India (*MMTC*), National Thermal Power Corporation (*NTPC*), Oil and Natural Gas Commission (*ONGC*) and Engineers India Ltd. (*EIL*). Among all these enterprises *BHEL* is the pioneer in the field of human resource accounting since mid-1970. Most of the Indian companies and corporations have followed basically Lev and Schwartz Model for valuation of human resources. - The model involves valuation of human resources on the basis of the present value of the estimated future earnings of the employees discounted at the cost of capital rate. *BHEL* has incorporated certain improvements in this model. The company has classified its employees into six categories based on skill, type of work, experience and qualifications. In each category 10 to 15 salary grades have been identified to facilitate the valuation of human resources. The model adopted by *BHEL* is given below:

$$HRV = \frac{P \times 12 \times N \times E \times I}{F}$$

where

- HRV* = Human Resources Value of the group of employees in the particular salary grade.
P × 12 = Annual compensation per employee in the given salary grade. This includes various items basic pay, *DA*, *CCA*, *HRA*, *PF* contribution by employers etc. *N* = Total number of employees in the grade.
E = Efficiency Factor. The factor varies with the amount of experience. It decreases at about 5% for each accounting period of five or six years.
I = Incremental Factor. It is 5% for a five year period. The period of 5 years has been taken as the basis in the assumption that people with five years experience are normally promoted to the next higher grade.
F = It has been taken at 12% per annum which is the weighted average cost of capital to the company.

For the benefit of readers, we are giving below extracts from financial statements of *BHEL* and *SAIL* disclosing information regarding human resources in the organisations.

Table 1

HUMAN ASSET VALUE ANALYSIS— *BHEL* (Rs Crore)

	1989-90	1988-89	1987-88	1986-87
Human Asset Value	2673	2183	1,827	1,588
Fixed Assets (Current Cost)	2098	2002	1,772	1539
Investments	286	160	117	64
Current Assets (Current Cost)	486	456	297	386
Total Resources (Current Cost)	5543	4802	4012	3578
Turnover	2922	2620	2319	1994
Value added	976	920	893	792
	<i>Times</i>	<i>Times</i>	<i>Times</i>	<i>Times</i>
Turnover/Human Resources	1.09	1.20	1.27	1.26
Turnover/Fixed Assets	1.39	1.31	1.31	1.30
Turnover/Total Assets	0.53	0.55	0.58	0.56
Value Added/Human Resources	0.40	0.42	0.49	0.50
Value Added/Fixed Assets	0.41	0.46	0.50	0.51
Value Added/Total Resources	0.19	0.19	0.22	0.22
Human Resources/Total Resources	0.48	0.45	0.46	0.44

Table 2
HUMAN RESOURCES VALUE— MARCH, 1988-SAIL

	Age Groups					(Rupees Crore)	
	Below 25	25 to 35	35 to 50	45 to 50	Over 50	Total	Total 1986-87
Works							
Managers	-	1.75	119.00	55.41	27.76	203.92	185.02
Executives	44.85	328.34	317.21	100.77	46.51	837.68	704.67
Supervisors	18.77	287.56	1084.23	652.15	220.61	2263.32	1842.85
Clerical Staff	1.52	12.63	35.49	10.78	1.83	62.25	78.79
Skilled Workers	142.73	916.16	1464.99	463.20	101.78	3088.86	2780.65
Semi-Skilled/ Unskilled Workers	178.57	804.59	376.01	64.27	11.24	1434.68	1348.85
Total	386.44	2351.03	3396.93	1346.58	409.73	7890.71	6940.83
Projects							
Managers	-	-	18.02	11.81	4.37	34.20	26.28
Executives	1.00	28.07	70.41	15.56	5.62	120.66	104.91
Supervisors	0.80	2.87	76.57	51.72	26.61	158.57	116.65
Clerical Staff	0.27	3.88	8.57	0.98	0.21	13.91	16.26
Skilled Workers	0.35	7.51	42.65	16.72	6.78	74.01	141.85
Semi-Skilled/ Unskilled workers	0.30	13.15	10.45	3.71	1.62	29.23	53.72
Total	2.72	55.48	226.67	100.50	45.21	430.58	459.68
Mining							
Managers	-	-	7.08	3.03	1.32	11.43	8.36
Executives	2.59	27.18	15.92	11.74	4.78	62.21	55.84
Supervisors	1.99	29.41	83.82	66.07	26.46	207.75	148.19
Clerical Staff	1.20	17.74	16.40	2.40	0.53	38.27	38.62
Skilled Workers	8.96	71.84	94.78	53.52	15.15	244.25	251.29
Semi-Skilled/ Unskilled workers	12.83	179.32	110.97	27.31	7.67	338.10	469.52
Total	27.57	325.49	328.97	164.07	55.91	902.01	971.82
Research & Development							
Managers	-	3.57	21.28	5.63	2.66	33.14	16.67
Executives	4.25	29.12	15.52	3.42	2.38	54.69	34.11
Supervisors	0.33	5.06	3.91	1.97	0.43	11.70	8.37
Clerical Staff	1.05	10.09	1.42	0.23	0.01	12.80	10.40
Skilled Workers	0.72	2.91	0.68	0.48	0.12	4.91	9.92
Semi-Skilled/ Unskilled workers	2.37	16.04	4.75	0.41	0.04	23.61	10.24
Total	8.72	66.79	47.56	12.14	5.64	140.85	89.71
Marketing							
Managers	-	-	6.11	5.42	1.98	13.51	12.40
Executives	4.91	24.77	17.51	10.40	2.01	59.60	46.80
Supervisors	-	6.04	25.21	9.37	4.11	44.73	36.64
Clerical Staff	4.32	65.34	61.67	9.72	3.08	144.13	131.68
Skilled Workers	-	2.93	4.91	1.28	1.67	10.79	10.23
Semi-Skilled/							

Unskilled workers	1.64	23.80	21.02	2.26	0.95	49.67	49.97
Total	10.87	122.88	136.43	38.45	13.80	322.43	287.72

Total

	Age Groups					Total	Total 1986-87
	Below 25	25 to 35	35 to 50	45 to 50	Over 50		
Administration & Services							
Managers	-	1.11	37.55	18.35	18.02	75.03	67.25
Executives	30.63	117.97	107.22	46.03	71.42	373.27	264.08
Supervisors	4.79	86.34	299.03	186.89	69.98	647.03	539.44
Clerical Staff	7.84	138.88	185.06	39.67	7.98	379.43	397.98
Skilled Workers	19.84	94.32	123.41	60.58	49.76	347.91	345.66
<i>Semi-Skilled/</i>							
Unskilled workers	40.18	226.57	193.98	34.48	8.08	503.29	463.50
Total	103.28	665.19	946.25	386.00	225.24	2325.96	2077.91
Grant Total	539.60	3586.86	5082.81	2047.74	755.53	12012.54	10827.76

Source: Steel Authority of India Limited, Annual Report, 1987-88.

SOCIAL COST BENEFIT ANALYSIS

CONCEPT OF SOCIAL COST BENEFIT

A business organisation is also a social unit. It uses the society's resources and produces goods and services for which the society is the ultimate consumer. Thus, a business unit owes its very existence to the society. It is, therefore, necessary that a business should operate within the overall parameters determined by the society. Of course, profit making is one of the main objectives of the business. However, no business, big or small, can be allowed to exist if its existence is detrimental to the interests of the society. Similarly, the society is also to see that such business activities should be undertaken which are beneficial to the society as a whole. Keeping this objective in view, the Governments, both in free and controlled economies, enact such appropriate legislation for regulating growth and development of business, which they consider necessary in the overall national interest. For example, in India, there are certain fields in which the private sector is not allowed to operate at all, while there are certain areas which have been absolutely reserved for the small sector and still there are areas where both public and private sectors can operate singly or in joint collaboration with each other. The basic philosophy behind this arrangement is that all sectors of the economy, public or private, small or big, should work for the overall good of the society.

In some of the preceding chapters, we have discussed about the various techniques for evaluation of industrial projects. As a matter of fact, our main emphasis for evaluation has been so far on commercial aspects. The social aspect has so far been ignored by us. It is being increasingly realised that commercial evaluation of industrial projects is not enough to justify commitment of funds to a project specially when it belongs to in Public sector. As a matter of fact, hundreds of crores of rupees are committed every year to various projects in the public sector, concerning either with development of infrastructure facilities or otherwise necessary in the general good of the society. Evaluation of such projects cannot be done strictly on commercial principles. Their evaluation should rather be done keeping in view the social cost and benefits associated with them.

The concept of social cost benefit is now increasingly applied to the private sector also. The private sector also uses the resources of the society and, therefore, it has moral responsibility to undertake only such projects which are socially desirable. It should, while analysing capital expenditure proposals, keep in view the social contribution aspect. In other words, besides commercial viability of the project, it should also see the associated cost and benefits to the society. It should not undertake a project which will result in heavy social cost to the society, though it may be a commercially viable proposition.

The concept of social cost benefit has now started taking practical shape. The Planning Commission has already decided that in future the feasibility studies for the public sector projects will include an analysis of the social rate of return. In the case of private sector also, a socially beneficial project may be more easily acceptable to the Government and hence the social cost benefit analysis will be relevant while granting various licences, approvals, etc.

Moreover, with the present pace of realisation of social responsibility, ultimately only those organisations are bound to survive which do not go against the interest of the society in general. Hence, social cost benefit evaluation is beneficial for all projects whether in the public or private sectors.

MEASUREMENT OF SOCIAL COST BENEFIT

The United Nations Industrial Development Organisation (*UNIDO*) and the Centre for Organisation of Economic Co-operation and Development (*COECD*) have come with useful publications dealing with the problem of measuring social costs and social benefits. It may be noted, in this context, that the actual cost of or revenues from the goods and/or services to the organisation do not necessarily reflect the monetary measurement of the cost or benefit to the society. This is because these figures are grossly distorted on account of restrictions and controls imposed by the Government. Hence, a different yardstick has to be used for evaluating a particular payment in terms of cost and sacrifice on the part of the society. Such payments are easily valued at opportunity cost or shadow prices to judge their real impact in terms of cost to society for the purpose of social cost benefit evaluation. Of course, it is almost impossible to measure in precise monetary terms, the real costs and benefits to the society as a result of a project. However, a broad judgment can be made about the acceptability or otherwise of a project on social grounds by looking to the different social aspects associated with the project. The following are some of the indicators/criteria which can be used for measuring the social costs and benefits associated with the projects.

(1) **Employment potential** The impact of the proposed project on the employment situation is an important consideration in a developing country like India. A project having higher employed potential has to be preferred over a project having a lower employment potential.

(2) **Capital output ratio** This ratio measures the expected output in relation to the capital employed in the project. Since capital is a scarce resource, the desirability of a project can be judged on the basis of the return which the project is expected to give on capital employed in the project. This criterion is particularly important in case of developing countries which suffer from a constraint of capital resources. According to this criterion, a project giving a higher output per unit of capital employed is to be preferred over a project giving a lower output.

(3) **Value added per unit of capital** This criterion is similar to the capital output rating. However, in case of this criterion, the estimated value added by a project is considered in place of the total value of the output. The term "Value Added" refers to the cost incurred by an organisation, (such as salaries, wages, interest, etc.) in converting materials into finished products. Thus, the value added by a project can be ascertained by deducting the total value of bought-out inputs, such as raw material, components, etc. from the total value of production.

This criterion is superior to the "Capital Output Ratio" since it considers the net contribution of the firm to the nation's economy. For example, if a firm is engaged merely in packing a manufactured product into small lots, it will have a high capital output ratio but its contribution in terms of "value added" will be negligible.

While evaluating different projects according to social cost benefit analysis technique projects having high "value added" content are to be ranked high.

(4) **Savings in foreign exchange** The impact of the project on the foreign exchange reserves of the country is also good social criterion for accepting or rejecting a project. In a developing country like India, where the foreign exchange position generally remains tight, this is an important criterion, while making appraisal of a project. For evaluating the projects according to this criterion, projects can be ranked according to the net contribution the projects are going to make to the foreign exchange reserves of the country. Projects having greater potentiality in terms of foreign exchange benefits will have priority over other projects.

(5) **Cost benefit ratio** According to this criterion, the projects are evaluated on the basis of total social benefits and costs associated with the projects. Social benefits for this purpose include all economic and non-economic, internal and external benefits which the society is likely to receive on account of the project. Similarly, the term social cost includes all costs which the society will have to pay whether in monetary terms or otherwise for the project. While evaluating projects according to this criterion, the projects are ranked according to their cost benefit ratios. A project having the most favourable cost benefit ratio is given the highest preference.

The Centre for Organisation of Economic Cooperation and Development (*OECD*) has given the following methodology for working out the social cost benefit ratios relating to a project :

- (a) All financial costs of a project during the construction period and the operational stage should be ascertained.
- (b) The financial costs so ascertained will have to be converted into social costs. For this purpose, the financial cost, as determined above, should be segregated between cost incurred in terms of foreign currency and cost incurred in terms of local currency.

- (c) The financial cost incurred in terms of foreign currency will be considered as social cost of equivalent amount without any adjustment.
- (d) The local currency cost will be classified into three categories :
- Tradeable items costs.
 - Labour costs.
 - Residual items costs.

The computation of social cost of each of the above items is done as follows: *Tradeable items cost* The tradeable items are those items which are dealt in international market. These items include most of the commodities except water and electricity, which can be theoretically traded in the international market. The social cost of tradeable items is determined on the basis of international prices of the commodities concerned.

Labour costs The computation of social cost of the labour involved in project is done by dividing the labour force into three categories—skilled, semi-skilled and unskilled. The social cost of each of these three categories is worked out separately by adopting the shadow pricing technique.

The term shadow price refers to the rate attached to a factor which is not the normal or actual price paid for it. While determining shadow price, the various benefits and opportunity cost, tangible and intangible attached to actual cost incurred on a factor are considered. For, example, the shadow price for unemployed person is much lower than the normal prevailing wage rate. The social costs of labour, according to shadow pricing technique, are lower than the total amount of wages paid due to the following reasons :

- (i) The society gets back a part of the payments made in the form of direct and indirect taxes.
- (ii) Wages paid to labour generate demand for various goods. This requires production of the goods resulting in economic development of the society.
- (iii) Wages are paid to the labour for the work put in by them. Working increases their skill. This, naturally, results in development of human resources of the society.
- (iv) An industrial project causes shifting of manpower from less profitable and over employed sector to more productive and profitable sectors resulting in overall better development of the society,
- (v) The costs incurred by the industrial project on social security and benefit schemes, such as housing, schooling, medical facilities, etc., are off-set by resulting social benefits.
- (vi) Employment generation helps in fulfilling the broad social objective of providing employment for different sections of the society.

Residual items costs These include those items which are neither tradeable items nor labour costs. The social cost of these items is ascertained by determining their opportunity cost depending upon the nature of each item of cost.

- (e) The total value of social benefits from a project is ascertained by determining the total tradeable value of its finished products. In other words, the social benefits from a project can be judged with reference to the import value of such goods or to the detriment which the society suffers in case they are not produced.

The social cost benefit ratio can now be determined on the basis of the social costs and social benefits worked out as per the above methodology. Since various social costs and social benefits would arise at different points of time, the internal rate of social return can be computed by applying the discounted cash flow technique.

It may be noted that the techniques suggested in the preceding paras for evaluation of social cost and benefits is merely illustrative. It is not a perfect and precise technique. A lot of research is still to be done. Moreover, the technique does not take into consideration aspects such as happiness, aesthetic pleasure, etc., which are incapable of being quantified. The accountants have, therefore, to go a long way before they are in a position to evolve a suitable, satisfactory and generally acceptable technique for conducting social cost benefit analysis.

SOCIAL ACCOUNTING

Social accounting is concerned with the measurement and disclosure of costs and benefits to the society as a result of operating activities of a business enterprise. Thus, social accounting measures social costs and social benefits as a result of business activities for communication to various groups both within and outside the business.

It may be noted that social accounting is not the application of a new set of accounting principles or practices. It is the application of the same basic accounting principles for measuring and disclosing the extent, to which a business enterprise has met its social responsibility. Seidler has, therefore, defined social accountings as "modification and

application of conventional accounting to the analysis and solutions of problems of a social nature.”¹

The objective of social accounting can be summarised as follows:

1. Measurement of net social contribution Social accounting aims at identifying and measuring the periodic net social contribution of a firm. This includes the aggregate of net benefits to the company’s employees, to the community (*i.e.* local population) and to the general public.

2. Balance between firm’s strategies and social priorities Social accounting helps in determining whether the firm’s strategies and policies are consistent with the legitimate individual aspirations and also with the over all priorities of the community and the society.

3. Communication of information Social accounting aims to make available information of a firm’s goals, policies, programmes, contribution to social goals etc. to all segments of the society.

REPORTING OF SOCIAL COST BENEFIT INFORMATION

As stated above, social accounting measures and reports the social costs and benefits on account of operating activities of a business enterprise. The different criteria used for measurement of social cost benefits have already been explained in the preceding pages. We are now explaining the different approaches for reporting social costs benefit information to the different segments of the society.

Social statement approach According to this approach, two statements are prepared (*i*) Social Income Statement and (*ii*) Social Balance Sheet. The Social Income Statement provides information according to social benefits and costs to employees, local community and the general public. Social balance sheet portrays social investment of capital nature (*i.e.* social assets) *viz.* township, roads, buildings, hospitals, schools, clubs, etc. on the assets side and the organisation’s equity and social equity on the liabilities side.

This approach has the advantage of giving adequate quantitative information for being used for inter-firm and intra-firm comparisons. However, this approach is criticised on the ground that in the absence of well accepted measurement techniques, valuation of social costs and social benefits as per this approach cannot be considered reliable.

Most of the Indian companies are following this approach with some modifications. They include Minerals and Metals Trading Corporation of India Ltd. (*MMTC*), Oil India Ltd. (*OIL*), Steel Authority of India Ltd. (*SAIL*), Madras Refineries Ltd. (*MRL*) and Oil and Natural Gas Commission (*ONGC*) etc.

Operating statement approach According to this approach, a firm presents only the positive and negative aspects of social activities as a result of business operations. The positive aspects are broadly termed as “social benefits” while negative aspects are termed as “social costs.” The difference between social benefits and social costs represent the net social contribution by the firm.

Narrative approach This is simplest and easiest method for reporting social costs and social benefits information. In case of this approach, disclosure regarding social costs and social benefits is made in a narrative and not in a quantitative form. The firm generally highlights the positive aspects of its social activities.

This approach is not informative since it does not provide quantitative information. Moreover, inter-firm and intra-firm comparisons are also not possible.

Goal oriented approach This approach is based on the listed objectives of a firm. According to this approach, the firm prepares a list of its social and economic goals or objectives. At the end of the accounting year, the firm prepares its annual report giving the description of the goals both economic and social and the firm’s performance in respect of these goals. Wherever possible, the goals, and the achievements are presented in the form of charts and graphs.

The presentation of information about social costs and benefits in the above manner helps in ascertaining the direction in which the firm is moving in achieving its social goals. The actual social goals, can be compared with the pre-determined social goals and the performance of the firm can be evaluated.

Pictorial approach According to this approach, social activities undertaken by an enterprise are presented in the form of pictures. The annual reports contain photographs of school, hospital, club, public park established and/or, maintained by the firm. This is the simplest method of presenting social information and hence followed by many companies in our country.

SOCIAL COST BENEFIT ANALYSIS IN INDIA

There is no legal obligation on companies in India to provide details of social costs and social benefits while preparing their financial statements. However, some companies in private and public sectors are giving by means of supplementary information the details of social costs and benefits as a result of their operations. Some of these companies are as follows :

1. Tata Iron and Steel Co.
2. Projects and Equipment Corporation of India Ltd.
3. Bharat Heavy Electricals Ltd.
4. Indian Petrochemicals Corporation Ltd;

5. Cement Corporation of India,
6. Bharat Petroleum Corporation India Ltd.
7. Neyveli Lignite Corporation Ltd.
8. Oil India Ltd.
9. Cochin Refineries Ltd.
10. The Minerals & Metals Trading Corporation of India Ltd.
11. Indian Rare Earths Ltd.
12. Madras Refineries Ltd.
13. Oil & Natural Gas Commission.

For the benefit of readers we are giving details of social income statements and social balance sheet prepared by SAIL for the year 1988-89 and 1990.

Annexure 1
Steel Authority of India Ltd.
SOCIAL INCOME STATEMENT

	1989-90	1988-89
(Rupees in crores)		
1. SOCIAL BENEFITS & COSTS TO EMPLOYEES		
<i>A. Social benefits to employees</i>		
<i>a. Medical & Hospital facilities</i>	46.15	36.92
<i>b. Township & Housing facilities, including concessional electricity and water supply.</i>	91.65	74.48
<i>c. Education facilities</i>	32.16	23.69
<i>d. Canteen facilities</i>	8.95	7.89
<i>e. Recreational & Cultural Activities</i>	2.20	1.57
<i>f. Concessional Transport</i>	16.24	12.12
<i>g. Training & Development</i>	14.24	11.26
<i>h. Holiday Benefits</i>	104.30	82.76
<i>i. Retirement Benefits</i>	131.58	98.84
<i>j. Bonus & Other Benefits Total Social Benefits to employees</i>	61.12	64.69
	508.59	416.22
<i>B. Social costs to employees</i>		
<i>a. Lay off and involuntary termination</i>	3.92	2.99
<i>b. Extra hours worked by executives but not paid</i>	5.94	5.39
Total Social Costs of Employees	9.86	8.38
Net Social Income to Employees	498.73	407.84
2. SOCIAL BENEFITS & COSTS TO COMMUNITY		
<i>A. Social benefits to community</i>		
<i>a. Taxes paid to local authorities</i>	2.43	2.94
<i>b. Environmental improvements</i>	4.20	4.18
<i>c. Welfare activity for the community</i>	1.76	0.97
<i>d. Generation of job potential</i>	723.79	658.00
<i>e. Business generation for community</i>	1415.98	953.00
Total social benefits to community	2148.16	1619.10
<i>B. Social costs to community</i>		
<i>a. Increase in cost of living in the vicinity of steel plants</i>	222.70	204.00
Total Social Costs to Community	222.70	204.00
Net Social Income to Community	1925.46	1415.10

3. SOCIAL BENEFITS AND COSTS TO GENERAL PUBLIC

A. Social Benefits to General Public

a. Taxes and Duties-Central	1468.29	1194.98
b. Taxes and Duties-State	230.74	208.19
c. Business Generation	1350.33	1083.66
d. Foreign Exchange-earned	114.81	74.89
e. Foreign exchange-saved	14.50	13.73
f. Research and development efforts	56.19	27.20
Total Social Benefits to General Public	3234.86	2602.65

B. Social Costs to General Public

a. Central services and facilities consumed	34.42	30.27
b. State services and facilities consumed	254.11	247.42
c. Expenditure in foreign exchange	760.35	850.71
Total Social Costs to General Public	1048.88	1128.40
Net Social Income to General Public	2185.98	1474.25
Net Social Income (1+2 + 3)	4610.17	3297.28

SOCIAL BALANCE SHEET

as on 31st March, 1990

	<i>As on 31st March, 1990</i>	<i>As on 31st March, 1989</i>
<i>(Rupees in crores)</i>		
<i>Liabilities</i>		
Organisation Equity	382.73	350.21
Social Equity (employees' contribution)	15790.39	12725.33
	16173.12	13075.54
<i>Assets</i>		
Social Capital Investments		
Land	9.84	9.72
Residential & Other Buildings	280.57	253.38
Road & Bridges	22.90	21.05
Road supply & Sewerage	33.22	33.61
Furniture & Fittings	2.60	2.01
Other Equipment	33.60	30.44
Human Resources	15790.39	13075.54

Source: Annual Report, Steel Authority of India Ltd. 1989-90

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Chapter-16

Financial Engineering: A Multi-Disciplinary Approach to Risk-Return Management

Evolution and Meeting

Revolutionary changes in financial markets and information technology have multiplied both opportunities and risks to finance executives. Price volatility, risk dimensions and investor increased awareness of capital markets have necessitated the development of new financial instruments for the survival of organizations in the changing scenario of modern economics. Corporate entities are exposed to various risks due to the deregulation of markets. According to Kiran Umrootkar, Senior Vice President for Tata Finance, "While deregulation has provided the corporate sector with several choices, it has also, in turn, given rise to new risks." Since the value of the rupee is variable, risks have multiplied. The finance executive should, therefore, be equipped with a new set of tools to enable him to develop solutions to relevant problems. Rapid changes in the field of corporate finance, bank finance and investment finance in recent years have given birth to a new discipline known as financial engineering.

According to J.D. Finnerty, "Financial engineering involves the design, development and implementation of innovative financial instruments and processes and the formulation of creative solutions to problems in finance." Designing a financial instrument depends on the problem situation of the firm. The lost importance of traditional financial tools has necessitated the designing of new financial tools such as swaps, mortgage-backed products etc. Creative solution is a novel twist towards the creation of a mutual fund with a new focus.

Financial engineering is helpful in suppressing or minimizing the risk associated with organizations. It is a multi-disciplinary approach to the management of risk and return in portfolio management. It involves the use of derivative financial products to decompose the standard financial transaction into its elements and then synthesize them into an innovative cross structure to suit the requirements of the prices and preferences of investors and issues.

Practically financial engineering is applicable to a number of important areas such as corporate finance, investment management, money management and risk management. It is important to commercial banks, investment banks, financial analysts etc. It is applicable to the corporate side also because the interests of the shareholders and creditors are directly linked with the management of the concerns. There may be different solutions for a single problem. But selecting an optimal solution is a typical job for the decision-maker. An in-house financial engineer is often the best person to evaluate the options and consider the qualitative effects of such alternatives.

Financial "Engineering vs Analysis"

There exists a lot of parity between financial engineering and financial analysis. Financial analysis is the "process of identifying the financial strengths and weaknesses of a firm by properly establishing relationship between the balance sheet and the profit and loss account data. Metcalf defines financial analysis as "the process of evaluating the relationship between the component parts of a financial statement, to obtain a better understanding of the firm's financial position and performances." Myers opines that "financial analysis is largely a study of relationship among the various financial factors in a business as disclosed by a single set of statements, and a study of the trend of the factors as shown in a series of statement." Financial engineering has been developed for the peculiar purpose of risk management. It is the process of formulating and implementing a new instrument as a solution to the problem. Financial analysis and financial engineering may be distinguished as follows:

- (i) Financial analysis takes the fundamentals of analysis as the basis whereas financial engineering is based on the discipline of engineering.
- (ii) While the purpose of financial analysis is to diagnose the accounting information, the purpose of financial engineering is to innovate new financial products and processes.
- (iii) Financial analysis is a postmortem effort. Financial engineering is a live process in the organization.
- (iv) Financial analysis is purely dependent on the accounting information which is prepared without emphasizing inflationary conditions and other risks, whereas financial engineering takes various risk factors into consideration and innovates financial products.
- (v) Financial analysis can be undertaken to judge the profitability and financial soundness of a firm, whereas financial engineering is undertaken for the minimization of the various risks.

Here it would be appropriate to clarify the role of a financial analyst and that of a financial engineer with the help of an illustration. For this purpose, let us consider a firm with a highly volatile cash flow stream. The firm would like to know the sources of cash flow volatility and how to remove it. The firm hires a financial analyst determines that the cash flow stream contains a secular trend, a seasonal component, an exchange rate component and a small random component. Each component is measured and isolated. At this point the analyst has finished his work. He was simply explained the sources of the firm's risks. But how about the elimination of these risks? Now it is time to bring in the financial engineer. The financial engineer picks up where the analyst leaves off. He structures solution to the volatility problem. The solution may consist of several separate parts, each designed to eliminate one of the volatility components. Thus, the financial engineer goes one step beyond that of the analyst. But in order to do so, he must first understand financial analysis and be proficient in the appropriate methodologies.

Risk-Return Dynamics

Financial engineering involves the creation of investment positions with specified pay-off patterns. Take, for example, options. One of the attractions of options is the ability they provide to create investment positions with pay-off that depend in a variety of ways on the values of other securities. Options can also be used to design new securities with desired patterns of exposure to the price of an underlying security. While the majority of financial engineering takes place for investment pools such as pension funds or mutual funds, some applications have been designed for individuals. One highly successful retail product is the 'Liquid Yield Option Note' (LYON). It is a zero coupon, convertible, called and puttable bond.

The liquid yield option note pays no interest income and it is priced at \$250 with a maturity value of \$1,000 in 16 years. If it is not called, converted or redeemed, this instrument provides a yield-to-maturity of 9 per cent. Several options may result in an early retirement of the issue. First, the investor can convert each bond into 4 shares underlying the stock. Second, the investor can sell the bond back to the issuer at a predetermined price that rises over time. This combination of options results in risk sharing that seems to be attractive to both the issuer and the investor. The conversion option provides investors with the possibilities of profiting from price advances in the underlying stock. At the same time, the embedded put option provides the bondholder with a protective floor. Finally, the call feature allows the issuer to call the bonds back for refinancing, if the interest rates drop. There are about 15 stages in the process of developing a new financial instrument, viz., formulation of the new product, idea generation, idea screening, concept testing, business analysis, project authorization, product design and testing, process and system designing and testing, marketing programme, personnel training, product testing pilot run, test marketing, full scale launch and post-launch review.

Risks are of two broad classes, viz., systematic risk and unsystematic risk. Systematic risk refers to the variability of return caused by common factors affecting the price of all securities alike, e.g., market risk arises from changes in market, interest rate risk arises from interest changes etc. Unsystematic risk refers to the variability of return caused due to unique factors, e.g., business risk relating to a particular industry, financial risk due to inefficient capital management, management risk due to poor efficiency etc. Depending on the circumstances obtaining from time to time in the operating environment of the business, systematic and unsystematic risks may ultimately transform themselves into one or more of the company risk, business risk, commodity/product risk, financial risk, economy risk and risk arising from international factors. In a decision situation, risks may be the result of one or more of wrong investment decisions, wrong timing of investment, nature of instruments in which investment is made, credit worthiness of the issuer, maturity period of investment, size of investment, method of investment, e.g., secured or unsecured, terms of lending, nature of the industry in which the company is operating and so on. Financial engineering has emerged to innovate financial instruments for the management of various investment risks and to maximize returns thereon.

Growth Factors

Financial engineering was born two decades back. During this period of two decades various factors have evolved and stimulated one or another aspect of financial engineering. The various factors influencing the growth of financial engineering may be broadly classified into (i) environmental factors, and (ii) intrafirm factors. Environmental factors are factors external to the firm, uncontrollable but influencing the firm's performance. They include price volatility, globalization of markets, tax and accounting rules, technological developments, advances in financial theory, regulatory change and increased competition, cost information and cost of the transactions. A brief explanation of each of these factors is presented below:

- (a) **Price volatility:** Prices are determined by the market forces of demand and supply. If demand and supply are stable over a period of time, market clearing prices are stable over such a period. This is referred to as price

stability. But if demand and supply change rapidly over a short period of time, then market clearing prices also change rapidly. This is referred to as per price volatility. Price volatility has three dimensions, viz., speed, frequency and magnitude of price changes. Increased price volatility is not simple to understand and explain. Price volatility is a product of: (i) inflationary forces which disrupted the financial markets during the 1970s, (ii) breakdown of traditional institutions and international agreements, (iii) globalization of markets, (iv) rapid industrialization of many underdeveloped countries, and (v) greater speed in acquiring, processing and acting upon the information.

- (b) **Globalization of markets:** Modern multinational corporations produce goods, market them and obtain their financing wherever and however it best suits their long-run strategic plans. They can tap any developed financial market with ease and drive to do so by a desire to minimize cost and maximize reward. Globalization has increased the size of markets, greatly enhanced competition and exposed modern corporation to significant risks and cuts in profit margins.
- (c) **Tax and accounting rules:** Most of the financial engineering activities are inspired through tax asymmetries. Tax asymmetries are used by financial engineering to arbitrate in the process of selecting investment alternatives, to help firms to avoid but not to evade taxes. This practice is ruled by the courts as a constitutionally guaranteed right.
- (d) **Technological advances:** Technological break-throughs, especially the innovation of computers, are influencing financial engineering at a tremendous speed. Advances in high speed processors, powerful desktop units, network systems and methods of data entry are some of the influencing factors. Advances in telecommunications have increased the access of a financial engineer to obtaining information without delay. Yet another important area is the development of software required by financial engineers such as spread sheet, accounting software etc., without which the development of computers is meaningless. Technological developments have helped the financial engineering to efficiently manage the firm's price risks inherent in a market economy.
- (e) **Advances in financial theory:** A knowledge of financial theory is necessary for a financial engineer to function effectively. Financial theories have an inseparable connection with the economic models and most of the financial theorists are well-versed in the modeling skills of economics. Many leading academic institutions have spun their finance departments off from their economics departments. Finance is also closely associated with accounting. Financial engineering requires a solid foundation in accounting principles.
- (f) **Regulatory change and increased competition:** Nowadays deregulation is a common phenomenon with almost all economies. Deregulation has fed competitions and forced once-protected industries to become either more efficient or close down, thus releasing their resources to more productive ends. This had a number of related impact a that have encouraged financial engineering. In India, various regulatory measures have shifted industrial organizations from protectionistic practices a deregulation-oriented practice. Apart from the industrial policy resolutions, various other enactments, i.e., MRTP Act, FERA, SEBI Act etc. also have their own influence on the development of financial engineering.
- (g) **Cost information and transaction:** Competition among investment banks increased the transactional nature of investment banking. At the same time, the cost of information and that of transacting declined significantly during the 1980s. Some innovations which have reduced the transaction cost over the years include the development of "third" and "fourth" markets for block trades by institutions, electronic trading, emergence of an efficient discount and brokerage business for small investors, decline in floatation cost etc.

Intra-firm factors are factors internal to the firm and the firm can exercise at least some control on them. These factors include liquidity needs, risk aversion, agency costs, sophistication of quantitative techniques among investment managers and formal training of senior level personnel. The liquidity needs refer to the degree to which a security value deviates from par as economic conditions change, e.g., change in the interest rate. It may also refer to the degree to which a market can absorb the purchase and sale of a security without imposing excessive transaction costs. Individuals as well as firms are risk averse, which made financial engineers innovate some instruments for efficient risk management. During the last two decades, the instruments innovated for risk management are interest rate options, interest rate futures, stock-index futures, currency futures, currency options, interest rate swaps, currency swaps, commodity swaps, equity swaps etc. During this period another important development for efficient risk management has been the asset/liability management technique. Both corporations and individuals have liquidity needs and many of the financial innovations pioneered during the last 20 years have targeted these needs. Some innovations were designed to provide easier access to cash, while others were designed to make it easier to put

temporarily unneeded cash to work. Examples are money market funds, money market accounts, electronic funds transfer and the electronic payment system.

Tools of Financial Engineering

A financial engineer cannot be successful unless he possesses a tool kit like an engineer. For a financial engineer, two groups of tools are developed, viz., conceptual tools and physical tools. Conceptual tools involve the ideas and concepts which underlie finance as a formal discipline. Physical tools are the instruments and processes which can be derived from the existing financial instruments as their elements to accomplish some specific purpose. The popular conceptual tools in the tool kit of a financial engineer include valuation theory, portfolio theory and hedging theory. A brief explanation of each of them is given below:

- (i) **Valuation theory:** Valuation theory is the foundation of all financial analyses and financial engineering. The main elements involved in valuation are cash flows, time value and its sensitivity. Cash flows are relevant to the financial engineer for calculating the expected cash flow of the project to be selected. Time has a value and this value must be explicitly considered while evaluating cash flows. The time value of money is the net present value is every sensitive to change in the discount rate. The valuation methods of cash flows are very helpful to the financial engineer in many aspects. They are used to price all forms of financial securities, viz., common stocks, preferred stocks, bonds, mortgages, real estate deals etc.
- (ii) **Portfolio theory:** A portfolio is a collection of assets. Each portfolio has an associated mean return and variance of return. All assets contained in the portfolio should minimize risk and maximize return on the investment. Risk and return analysis is very essential for investment and portfolio management. A rational investor wants to maximize the expected return subject to his tolerance of risk. He arrives at a conclusion about investment by comparing returns on alternative investments. All other things remaining the same, an investor with a short horizon will find a given portfolio more risky than an investor with a long-horizon portfolio. Hence, a financial engineer who structures a portfolio for clients must consider not only the clients' degree of risk aversion but also the length of their investment horizon. Leverage magnifies the potential financial return with an associated financial risk. The purpose of leverage is to increase the return without increasing the size of investment. There are many ways to obtain leverage. Most widely used ways are buying an asset using borrowed money, holding levered contracts rather than cash assets and purchasing contingent claims.
- (iii) **Hedging theory:** A hedge is a position that is taken as a temporary substitute for a later position in another asset or to protect the value of an existing position in an asset until the position can be liquidated. The instruments most often used for hedging are futures, forwards, options and swaps. Selection depends on the risk profile associated with the cash position to be hedged, the type of risk the hedge would like to hedge against, the cost of hedging with different hedging instruments and the effectiveness of different hedging instruments.

Physical tools are instruments which include fixed income securities, equities, futures, options and swaps. Basically financial engineers developed new financial products for the firms and clients where the existing products were not suitable. Fixed income securities are those private and public sector issues that pay a fixed sum each period or pay a sum to be determined by a formula or guarantee a fixed sum upon maturity. The examples are preferred stock, floating rate debt and zero coupon bonds. Fixed income securities can be raised both from primary and secondary markets. Equity capital is contributed by the owners of firms which may not guarantee returns in a short period. Returns on equities depend on the quality of firms. Futures are highly standardized contracts that call for the deferred delivery of some clearly defined rule. A "futures" contract is defined as "a firm legal commitment between a buyer and a seller in which they agree to exchange something at a specified price at the end of a designated period of time." Futures trading on stocks and shares was prohibited in India up to March, 1995. In "futures" contract delivery is necessary and the price is known in advance. The risk involved in "futures" trading is borne by both the buyer and the seller. At present there are financial futures on debt instruments, viz, interest rate futures, currency futures and stock index futures. Futures constitutes a risk hedge cater to the speculative instinct of investors. It is a more efficient method of controlling risk on portfolio as it reduces the transaction cost, trading cost and price pressure. Futures smoothen asset allocation, provide a hedge for future inflows and outflows of cash and reduce the impact of bullish and bearish trading. The pay-off profiles associated with options are somewhat more complex than those associated with future contracts. A swap is an agreement between two counter parties in which the first agrees to make fixed-price payment to the second, while the second agrees to make floating — price payment to the first. For example, a financial engineer can use swaps to hedge multi-period price risks to reduce the cost of financing, to enter new markets and to create new instruments.

Notes

1. In some cases when traditional instruments cannot accomplish the desired results, the nature of the financing required or cost considerations dictate a special financial instrument with special features. The financial engineer can develop new instruments to secure funds necessary for the operation of a large scale business.
2. The following are the commonly used tools in financial analysis:
(a) Comparative statements, (b) Trend analysis, (c) Common size statements, (d) Funds flow analysis, (e) Cash flow analysis, (f) Ratio analysis, and (g) Cost volume profit analysis.
3. The price one pays for the use of a unit of another's money is called interest rate and the price one pays in one's own currency for the use of a unit of a different currency is called exchange rate. Equity capitalization rate is a price paid for providing equity capital for a firm.
4. A tax asymmetry exists when two firms are subject to different effective tax rates. The prime reasons are encouragement of some industries for development through granting special tax exemptions and preferences, imposition of different tax burdens by different countries, i.e., *taxing differs between a domestic.*

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Chapter-17

Accounting Standards

Historical Background of Accounting Standards

The Accounting standards were not in existence upto the end of 1971 any where in the world. In the beginning of 70's the advent of MNCs, the need was felt of the some prescribed yardsticks in connection with preparation of accounts, their presentation and reporting mechanism. It all led to the birth of A.S. at international level as well as national level. The purpose of A.S. was making A.S. more identical, comparative reliable, for taking better investment decisions and for better reporting.

In 1970 standard setting board or committees were active in number of countries such an the U.S.A. UK, Canada, Australia, Japan and India. For making identity in the work of committees of so many countries, a body at international level was being needed. Then IASC (International Accounting Standard Committee was established in 1973.

In India, keeping in view the international development in the field of Accountancy, The Institute of Chartered Accountants of India (ICAI) constituted the Accounting standard Board (ASB) in April 1977.

Such institutions/boards are also prevalent in almost all the countries of the world for example:

- Accounting Standard Board in India (ASB).
- Financial Accounting Standard Board in USA (FASB).
- Accounting Standard Board of U.K. (ASB).
- Accounting Standard Committee in Canada (ASC).

ACCOUNTING STANDARDS

Accounting standards may be defined as uniform rules for external financial reporting which may be applicable either to all or to a certain class of entity. Accounting Standards may be viewed as a method of resolving potential conflicts of interest between the various user groups which have access to company accounts and reports. The various groups will have different objectives, information needs, and capacities for the generation and interpretation of information and, therefore, conflicts may arise between groups outside the entity. For example, inflation accounting may benefit existing shareholders if corporate tax payments are reduced as a result of lower reported profits. It may also benefit society by improving the allocation of certain resources. On the other hand, employees may suffer if lower wage settlements are justified by lower reported profits. Most often, divergent views are found between the preparers (corporate managements) and external users. Accounting principles have been developed to provide a system of financial reporting to reflect management's description of the financial performance of an entity. In order to do this, they allow flexibility and choice in both accounting policies and the amount of disclosure. External users, on the other hand, may require consistency and comparability. These may lead to conflict between the prepares and users.

TYPES OF ACCOUNTING STANDARDS

Accounting standards may be classified by their subject matter and by how they are enforced. According to their subject matter Benston classifies standards as follows:

1. **Disclosure Standards.** Such standards are the minimum uniform rules for external reporting. They require only an explicit disclosure of accounting methods used and assumptions made in preparing financial statements. It is argued that the case of this type of disclosure seems overwhelmingly strong. Such a standard is unlikely to be controversial or create conflicts of interest, particularly since it does not constrain the choice of accounting policies or items to be disclosed.
2. **Presentation Standards.** They specify the form and type of accounting information to be presented. They may specify that certain financial statements be presented (*e.g.* a funds-flow statement) or that items be presented in a particular order in financial statements. Such standards place only a little more constraint upon the choice of accounting policies than disclosure standards and aim to reduce the costs to users of utilising financial statements.
3. **Content Standards.** These standards specify the accounting information which is to be published. Benston recognises three aspects to such standards:

- a. **Disclosure**-content standards which specify only the categories of information to be disclosed.
- b. **Specific**-construct standards which specify how specific items should be reported in accounts, e.g., a standard which specifies that finance leases be capitalised and disclosed in balance sheets.
- c. **Conceptually**-bases standards which specify the accounting treatment of items based upon a coherent and complete framework of accounting.

Another classification of accounting standards may be based upon their method of preparation and enforcement. Benston identifies:

1. **Evolutionary and Voluntary Compliance Standards.** Such standards have evolved as best practices and represent the conventional approach to accounting. As such, their general acceptability implies voluntary compliance by individual companies.
2. **Privately Set Standards.** Private accountancy bodies such as the ASC(UK) or FASB (USA) may formulate standards and devise means for their enforcement. Other bodies, such as trade associations or stock exchanges may set accounting standards for companies as a condition of membership or listing. Enforcement powers are thus more readily available.
3. **Government Standards.** These standards may be laws relating to company accounting practices and disclosures, as in the case of the Indian Companies Acts, or tax rules defining taxable profit. Alternatively, governmental departments or agencies may regulate accounting practices for certain industries.

It is significant to note that the above two classifications are complementary and not competitive.

Formation of the Accounting Standards Board

1. The Institute of Chartered Accountants of India (ICAI), recognising the need to harmonise the diverse accounting policies and practices in use in India, constituted the Accounting Standards Board (ASB) on 21st April, 1977.
2. The composition of the ASB is fairly broad-based and ensures participation of all interest-groups in the standard-setting process. Apart from the elected members of the Council of the ICAI nominated on the ASB, the following is the composition of the ASB:
 - i. Nominees of the Central Government on the Council of the ICAI (representing the Department of Company Affairs, Office of the Comptroller and Auditor General of India and Central Board of Direct Taxes).
 - ii. Representative of Reserve Bank of India.
 - iii. Representatives of Industry Associations [1 from Federation of Indian Chambers of Commerce and Industry (FICCI), 1 from Associated Chambers of Commerce and Industry (ASSOCHAM) and 1 from Confederation of Indian Industries (CII)].
 - iv. Representative of the Institute of Cost and Works Accountants of India
 - v. Representative of the Institute of Company Secretaries of India
 - vi. Eminent professionals co-opted by the ICAI (they may be in practice or in industry, government, education, etc.)
 - vii. Representative of Financial Institutions
 - viii. Representative of Securities and Exchange Board of India
 - ix. Representatives of Academic Institutions (1 from Universities 1 from Indian Institutes of Management)
 - x. Representative of Controller General of Accounts
 - xi. Representative of Central Board of Excise and Customs
 - xii. Chairmen of the research Committee and the Expert, Advisory Committee of ICAI, if they are not otherwise members of the Accounting Standards Board.

Objectives and Functions of the Accounting Standards Board

1. The following are the objectives of the Accounting Standards Board:
 - i. To conceive of and suggest areas in which Accounting Standards need to be developed
 - ii. To formulate Accounting Standards with a view to assisting the Council of the ICAI in evolving and establishing Accounting Standards in India

- iii. To examine how far the relevant International Accounting Standard/International Financial Reporting Standard (see paragraph 2.3 below) can be integrated while formulating the Accounting Standard and to integrate the same
 - iv. To review, at regular intervals, the Accounting Standards from the point of view of acceptance or changed conditions, and, if necessary, revise the same
 - v. To provide, from time to time, interpretations and guidance on Accounting Standards
 - vi. To carry out such other functions relating to Accounting Standards
2. The main function of ASB is to formulate Accounting Standards so that such standards may be established by the ICAI in India. While formulating the Accounting Standards, ASB will take into consideration the applicable laws, customs, usages and business environment.
 3. International Accounting Standards (IASs) issued by the International Accounting Standards Committee (now restructured as International Accounting Standards Board) are issued with a view to facilitate global harmonisation of accounting standards. Henceforth, the accounting standards issued by the International Accounting Standards Board (IASB) would be known as International Financial Reporting Standards (IFRSs). While formulating the Accounting Standards, ASB will give due consideration to IASs or IFRSs, as the case may be, and try to integrate them, to the extent possible, in the light of the conditions and practices prevailing in India.
 4. The Accounting Standards are issued under the authority of the Council of the ICAI. ASB has also been entrusted with the responsibility of propagating the Accounting Standards and of persuading the concerned parties to adopt them in the preparation and presentation of financial statements. ASB will provide interpretations and guidance on issues arising from Accounting Standards. ASB will also review the Accounting Standards at periodical intervals and, if necessary, revise the same.

Audited Financial Statements

1. For discharging its functions, ASB will keep in view the purposes and limitations of financial statements and the attest function of the auditors. ASB will enumerate and describe the basic concept to which accounting principles should be oriented and state the accounting principles to which the practices and procedures should conform.
2. ASB will clarify the phrases commonly used in financial statements and suggest improvements in the terminology wherever necessary. ASB will examine the various current alternative practices in vogue and endeavour to eliminate or reduce alternatives within the bounds of rationality.
3. Accounting Standards are designed to apply to the general purpose financial statements and other financial reporting, which are subject to the attest function of the members of the ICAI. Accounting Standards apply in respect of any enterprise (whether organised in corporate or other forms) engaged in commercial, industrial or business activities, irrespective of whether it is profit oriented or it is established for charitable or religious purposes. Exclusion of an enterprise from the applicability of the Accounting Standards would be permissible only if no part of the activity of such enterprise is commercial, industrial or business in nature. Even if a very small proportion of the activities of an enterprise is considered to be commercial, industrial or business in nature, the Accounting Standards would apply to all its activities including those which are not commercial, industrial or business in nature.
4. The term 'General Purpose Financial Statements' includes balance sheet, statement of profit and loss, a cash flow statement (wherever applicable), and statements and explanatory notes which form part thereof, issued for the use of various stakeholders, Governments and their agencies and the public. References to financial statements in this Preface and in the standard issued from time to time will be construed to refer to General Purpose Financial Statements.
5. The financial statements are the responsibility of the enterprise's management and the responsibility of the auditor is to express an opinion on the official statements based on the audit.

Scope of Accounting Standards

1. In formulation of Accounting Standards, the emphasis would be on laying down accounting principles and not detailed rules for application and implementation thereof.
2. The Accounting Standards are intended to apply only to items which are material any limitations with regard to the applicability of a specific Accounting Standard will be made clear by the ICAI from time to time. The date from which a particular Standard will come into effect, as well as the class of enterprises to which it will apply,

will also be specified by the ICAI. However, no standard will have retroactive application, unless otherwise stated.

3. Efforts will be made to issue Accounting Standards which are in conformity with the provisions of the applicable laws, customs, usages and business environment of the country. However, if a particular Accounting Standard is found to be not in conformity with law, the provisions of the said law will prevail and the financial statements should be prepared in conformity with such law.
4. ASB may consider any issue requiring interpretation on any Accounting Standard. Interpretations will be issued under the authority of the Council. The authority of Interpretation is the same as that of Accounting Standard to which it relates.
5. The Institute will use its best endeavors to persuade the Government, appropriate authorities, industrial and business community to adopt the Accounting Standards in order to achieve uniformity in preparation and presentation of financial statements.
6. The Accounting Standards by their very nature cannot and do not override the local regulations which govern the preparation and presentation of financial statements in the country. However, the ICAI will determine the extent of disclosure to be made in financial statements and the auditor's reports thereon. Such disclosure may be by way of appropriate notes explaining the treatment of particular items. Such explanatory notes will be only in the nature of clarification and therefore need not be treated as adverse comments on the related financial statements.
7. The Standards formulated by the ASB will have standard portions set in bold italic type. These should be read in the context of the explanatory material which will be set in the normal type.

Procedure for Issuing an Accounting Standard

Broadly, the following procedure is adopted for formulating Accounting Standards:

1. ASB determines the broad areas in which Accounting Standards need to be formulated and the priority in regard to the selection thereof.
2. In the preparation of Accounting Standards, ASB will be assisted by Study Groups constituted to consider specific subjects. In the formation of Study Groups, provision will be made for wide participation by the members of the Institute and others.
3. The ASB will consider the preliminary draft prepared by the Study Group and if any revision of the draft is required on the basis of deliberations, the ASB will make the same or refer the same to the Study Group.
4. The ASB will circulate the draft of the Accounting Standard to the Council members of the ICAI and other bodies as follows for their comments:
 - i. Associated Chambers of Commerce and Industry (ASSOCHAM)
 - ii. Federation of Indian Chambers of Commerce and Industry (FICCI)
 - iii. The Institute of Cost and Works Accountants of India (CICWAI)
 - vi. Standing Conference of Public Enterprises (SCOPE)
 - v. The Institute of Company Secretaries of India (ICSI)
 - vi. Central Board of Direct Taxes (CBDT)
 - vii. Department of Company Affairs (DCA)
 - viii. Comptroller and Auditor General of India (C&AG)
 - ix. Reserve Bank of India (RBI)
 - x. Indian Bank's Association (IBA)
 - xi. Securities and Exchange Board of India (SEBI)
 - xii. Confederation of Indian Industries (CII)
 - xiii. Any other body considered relevant by the ASB keeping in view the nature of the Accounting Standard
5. The ASB will hold a meeting with the representatives of specified bodies to ascertain their views on the draft of the proposed Accounting Standard. On the basis of comments received and discussion with the representatives of specified bodies, the ASB will finalize the Exposure Draft of the proposed Accounting Standard.
6. The Exposure Draft of the proposed Standard will be issued for comments by the members of the Institute and public at large. The Exposure Draft will specifically be sent to specified outside bodies (as listed above), stock exchanges, and other interest groups, as appropriate.

7. The draft of the proposed standard will normally include the following basic points:
 - a. Concepts and fundamental accounting principles relating to the Standard
 - b. Definitions of the terms used in the Standard
 - c. The manner in which the accounting principles have been applied for formulating the Standard
 - d. The presentation and disclosure requirements in complying with the Standard
 - e. Class of enterprises to which the Standard will apply
 - f. Date(s) from which the Standard will be effective
8. After taking into consideration the comments received, the draft of the proposed Standard will be finalised by ASB and submitted to the Council of the ICAI.
9. The Council of the ICAI will consider the final draft of the proposed Standard, and if found necessary, modify the same in consultation with ASB. The Accounting Standard on the relevant subject will then be issued by the ICAI.
10. For a revision of an Accounting Standard, the procedure followed for formulation of a new Accounting Standard, as detailed above, will be followed.
11. Subsequent to issuance of an Accounting Standard, some aspect(s) may require revision which are not substantive in nature. For this purpose, the ICAI can make limited revision to an Accounting Standard. The procedure followed for the limited revision will substantially be the same as that to be followed for formulation of an Accounting Standard, ensuring that sufficient opportunity is given to various interest groups and general public to react to the proposal for limited revision.

Compliance with the Accounting Standards

1. The Accounting Standards will be mandatory from the respective date(s) mentioned in the Accounting Standard(s). The mandatory status of an Accounting Standard implies that while discharging their attest functions, it will be the duty of the members of the Institute to examine whether the Accounting Standard is complied with in the presentation of financial statements covered by their audit. In the event of any deviation from the Accounting Standard, it will be their duty to make adequate disclosures in their audit reports so that the users of financial statements may be aware of such deviation.
2. Statutes governing certain enterprises require that the financial statements should be prepared in compliance with the Accounting Standards, e.g., the Companies Act, 1956 (section 211 of the Act), the Insurance Regulatory and Development Authority (Preparation of Financial Statements and Auditor's Report of Insurance Companies) Regulations, 2000. A statute may also require certain disclosures to be made in the event an enterprise governed by the statute does not comply with the Accounting Standards. For example, the Companies Act, 1956, requires a company to make the following disclosures in its profit and loss account and balance sheet where the profit and loss account and the balance sheet of the company do not comply with the Accounting Standards:
 - a. the deviation from the accounting standards;
 - b. the reasons for such deviation; and
 - c. the financial effect, if any, arising due to such deviation.

Financial Statements can not be described as complying with Accounting Standards unless they comply with all the requirements of each applicable Standard.

BENEFITS OF ACCOUNTING STANDARDS

Accounting standards have evolved out of the concern and criticism which the flexibility in accounting practice has created. At present accounting standards are regarded a major component in the framework of accounting and reporting practices. Standards exist to help the accounting practitioners to apply those, accounting practices regarded as the most suitable for the circumstances covered. Further, they help individual companies and their managements to justify whatever practices they adopt when producing their financial statements. The benefits of establishing accounting standards manifest themselves in different ways, either because they are real effects of those standards, because people perceive certain effects, or because they expect certain effects to follow and modify their behaviour accordingly. The benefits of accounting standards may be listed as follows:

1. **Reform in Accounting Theory and Practice.** Financial accounting has lacked, especially in the past, a coherent logical conceptual framework and structure for accounting measurements, financial reporting

objectives and substantiated evidence on accounting practice and usefulness of accounting data. It encouraged the emerging intelligence of accounting to develop accounting theories, to improve existing practices or to rectify their defects. In 1960s there was an outbreak in the accounting literature concerned with the issues and arguments about basic concepts in accounting; accounting standard, rules and law; wider effects of accounting policy choices. The search for the golden boomerang of accounting has yielded achievements and resulted into a greater awareness of alternative possibilities for defining and measuring financial performance.

2. **Benefits to Accountants and Auditors.** Accountants and auditors with the passage of time and a changing climate of opinion, have to work in an environment where they face the threat of stern sanctions and bad name to their professions. These result partly from changed penalties and remedies available under the company law and partly from the greater willingness of aggrieved parties and to take their causes before the courts. The risks to auditors of these developments are considerable, whether in terms of uncovered financial exposure to liability or adverse effects on professional reputation resulting from unfavourable publicity. Particularly dangerous are cases of undetected fraud, and of audited accounts, which are held to be misleading due to insufficient disclosure or use of inappropriate accounting principles. Given the increasing risks, the accounting profession realised that it needed to know what accounting standards are to prevail.

Though individual accountant and chartered accountancy firm are concerned with their own reputations, the other accountants' and firms' misconduct would prove costly since all accountants belong to a class in the eyes of public. While members of a chartered accountancy firm can discipline their fellow partners, it is difficult to monitor the performance of other chartered accountants. For this purpose, establishment of standard to which all chartered or certified accountants subscribe is useful. Thus, accounting standards are beneficial not only to the business enterprises but also to the accountants and auditors as well.

3. **To Improve the Credibility and Reliability of Financial Statements.** Financial statements of business enterprises are used by a diverse group of users for making sound economic decisions such as shareholders (existing and potential), suppliers (existing and potential), trade creditors, customers, employees, taxation authorities, and other interested parties. It is necessary, therefore, that the financial statements, the users use and upon which they rely, present a fair picture of the position and progress of the enterprise. It is the function of accounting (and auditing) standards to create this general sense of confidence by providing a structural framework within which credible financial statements can be produced. Where various alternative methods of measuring an economic activity exists, it is important that the best available one be used uniformly within a firm, by different firms, and to the extent practicable, by different industries. This guideline is required in order to meet a basic need of managers, investors and creditors to compare results and financial conditions of different segments of firms, different periods of a firm, different firms, and different industries. The value of the information provided by each enterprise to its investors is greatly enhanced if it can be compared easily with information from other enterprises. In the absence of standards, there would be no incentives to encourage an enterprise to conform to any particular model for the sake of comparability. Regulation, like rule of the road for drivers, is necessary to secure what everyone wants. Thus the main aim of accounting standards is to protect users of financial statements by providing them with information in which they can have confidence.
4. **Determining Managerial Accountability.** Accounting standards facilitate in determining specific corporate accountability and regulation of the company and thus help in measuring the effectiveness of management's stewardship. They help in assessing managerial skill in maintaining and improving the profitability of the company, they depict the progress of the company, its solvency and liquidity and generally they are an important factor increasing the effectiveness of management's performance of its duties and of its leadership. Standards aim to ensure consistency and comparability in place of (imposed) uniformity in financial reporting to permit better comparisons in profitability, financial position, future prospects and other performance indicators associated with different business firms. Management's basic purpose should be to make a choice of the best method (standard) available. The guidelines of relevance and appropriateness to intended use may be so crucial in a given setting that a departure from uniformity of practice (with full disclosure) may be justified. On the other hand, uniformity should never be the justification for inappropriate information. An accounting standard should significantly reduce the amount of manipulation of the reported accounting numbers that is likely to occur in the absence of the standard. If the standard is subject to manipulation, its effect is more likely to be dysfunctional, since the managers can hide their actual performance under the cloak of reporting according to externally determined accounting standards.

MANAGEMENT AND STANDARDS SETTING

Corporate managements play a central role in the determination of accounting standards. Management is central to any discussion of financial reporting, whether at the statutory, or regulatory level or at the level of official pronouncements of accounting bodies. Managements influence the standard setting based on its own self-interest. As long as financial accounting standards have potential effects on the firm's future cash flows, standard setting by (accounting) bodies will be met by corporate lobbying. Watts and Zimmerman observe:

"Managers have greater incentive to choose accounting standards which report lower earnings (there by increasing cash flows, firm value and their welfare) due to tax, political and regulatory considerations than to choose accounting standards which report higher earnings, and, there by, increase their incentive compensation. However, this prediction is conditional upon the firm being regulated or subject to political pressure. In small (*i.e.*, low political costs) unregulated firms, we would expect that managers do have incentives to select accounting standards which report higher earnings, if the expected gain in incentive compensation is greater than the foregone expected tax consequences. Finally, we expect management also to consider the accounting standard's impact on the firm's book-keeping costs (and hence their own welfare)."

Watts and Zimmerman's (above) view of accounting standards need not to be applied for deciding good or bad accounting. The self-interest of management is all that counts, atleast in determining the position of the prepares of financial statements. Self-interest apparently points in opposite directions for large and small companies, mainly because large companies are more susceptible to political interference and are therefore more sensitive about appearing to be too prosperous. However, Solomans does not agree with this view of Watts and Zimmerman and state that "the views that business advocate, which of course are not unanimous even within a single industry, cannot universally be explained by reference to their self interest. And even if they could, there is nothing like a one-to-one relationship between the lobbying positions taken by any particular groups of firms and the standards that are eventually promulgated."

Some persons argue that management should be given freedom and not be constrained by definitive sets of accounting measurement rules. This view does not appear to be correct and is not based on reality. Management should not be allowed to adopt any form of accounting it likes, for this type of freedom could lead to significant doubts about the quality of financial reporting and thereby reduce its credibility and potential usefulness. Given the freedom to managements, they may indulge in undesirable "creative accounting," and tend to conceal the truth rather than to disclose. This does not mean that there is conflict between management and investors over the question of objectives and benefits associated with accounting standards. Anything that makes the goals of investors and the goals of management congruent with each other will diminish the danger that accounting (and other) issues will be decided to the detriment of one group and in favour of the other. The accounting profession's efforts should be directed towards achieving consensus among the constituents, *e.g.*, investors and creditors, managers, auditors, government, the public at large, who may have different interests, different needs, and different point of view in standards setting. Without a consensus among the parties to accounting standards, there can be no effective enforcement. After studying the preferences (like and dislikes) of every constituent, the accounting profession should develop a measure of the overall "usefulness" of each preferred standard for all constituents and society. Roman observes:

"The arguments voiced for increasing the uniformity of accounting standards and reducing the flexibility of management in choosing among different accounting treatments could well be explained from an economic standpoint as means for reducing audit (monitoring) costs and for reducing the ambiguity of the resulting signal and the possible effect of such ambiguity on investors reaction. The larger the ambiguity of the signal resulting from an excessive flexibility on the part of management of choosing among accounting means of generating the signal, the lesser the reliability of the inference that can be made by investors on the basis of the signals received."

STANDARD SETTING BY WHOM?

An important question with regard to standard setting is deciding whether standards should be set by government or a private sector body or a government backed agency. Before arriving at any conclusion, an analysis of different arguments has been presented here.

Government as Standard Setter

The following arguments are generally given for standard setting by the government:

1. Government could better bring to bear the variety of intellectual disciplines that should be, but have not been, brought to bear on accounting standards economists, lawyers, investors, as well as accountants.
2. A government can better enforce compliance with accounting standards in that it is backed by the enforcement power of law. The problem of the enforcement of accounting standards would be minimised. In promulgating

accounting standards and regulations the legislator would provide whatever penalties they felt necessary for non-compliance. Accounting standards, as a practical matter, have a force of law and therefore, should be established by a government.

3. Public accountants may desire that accounting standards be enforced by government, for several reasons. One is the fear that competition among accountants may lead some to chance compromising their integrity. Another is the desire (common to most sellers of goods and services) to increase the demand for their products by legal requirements. A third is derived from the specialist's belief that the laity would benefit from a higher quality product, but does not recognise the benefits there from because of ignorance; consequently a legal requirement should be imposed.
4. A government would act more quickly on pressing problems and would be more responsive to the public interest. Also, the government is better equipped to control the redistributive effects of accounting standards than private sector standard setter and can more easily ameliorate their impact on any sector of society if this is desired. Private sector standard setting bodies have but minimum control over such effects. The only other way in which private standard setters can take such effects into account is by altering the substance of proposed standards so as to vary their impact on those parts of society which it is wished to either aid or protect from adverse effects. Such activities may have a cost in terms of distorting accounting standards away from what otherwise would be thought to improve the efficiency of resources allocation. The government may be better able to meet legitimate arguments concerning the economic consequences of accounting regulations without altering what might otherwise be regarded as an accounting 'ideal.'
5. A government would be free of conflicts of interest—more impartial and more responsive to all interests. It would not become a tool of business interests or of the accounting profession. Some argue that if the government were to assume this responsibility, business pressure groups would have less influence than they appear to have had over the conclusion of the private sector bodies. Also, government may not have to devote as many resources to obtaining consensus for proposed accounting reforms as do private sector standards setting bodies. It is said that noncompliance and explicit criticisms by business enterprises create difficulties in the enforcement of standards. Governments who command a reasonable majority may promulgate those accounting reforms which they desire without major and costly consensus seeking activity.

There are some problems associated with government being a standard setter. These difficulties are as follows

1. Technical accounting issues may be decided on the basis of the views of the political party in power at any time. It has also been argued that the perceived political importance of accounting matters would not be sufficient to obtain scarce legislative time. Thus, the legislature may be seen as generally rubber stamping the idea of interested civil servants and those who have influence on them and on politicians. That such regulation of accounting is better for society than private sector regulation may be doubted by many.
2. The process of accounting regulation by the government is lengthy and does not possess flexibility even where an item is judged of sufficient importance to obtain legislative time. The difficulty of getting items through the legislature may discourage efforts to change established accounting standards and may lead to rigidity.
3. The standards and regulations set up by government may fall short of objectivity and accuracy. In fact, government is behaviour oriented. Its basic business is to encourage or to force people to behave in certain ways. Accounting standards and regulations in a government environment would develop around two behavioural objectives, viz., (i) rule of conduct approach and (ii) economic incentives approach. The objective of a rule of conduct approach would be to restrain unfair economic behaviour. The primary objective of standards setting from this view point would be to limit the discretion of practitioners in order to minimise variations in reporting the earnings results of similar facts and circumstances. Standards reflecting this view would likely to emphasise uniformity of method and verifiability of results rather than accuracy of measurement. The objective of economic incentives approach would be to set standards that would motivate decision makers to act in ways that furthered government's social and economic goals. It flows from a view that accuracy of earnings measurement is impossible, and an accounting theory built on a measurement objective impractical. It sees the bottom line reported earnings, as a strong motivator and assumes that decision makers would react to the reported data even if that data varied significantly from what most practitioners might think was a more accurate measure. In this view, earnings would not be a measured result of observed economic activity; it would be a calculated cause of economic action.

Accounting standards, in fact, should develop around a primary objective of measuring return on investment for

particular organisations as accurately as possible. It should be developed as a measurement process, measurement of economic activity neutral as to behavioural consequences. It should be a tool for all economic decision makers buyer and seller, lender and borrower, manager and shareholders, regulator and regulated, general interest and special interest, public sector and private sector. This kind of accounting standard and policy it is doubted, could develop in government.

Private Sector Standard Setting Body

Arguments have also been advanced for giving standard setting task to private sector body. These arguments may be listed as follows:

1. Government could neither attract enough high quality talent nor devote sufficient resources to standards setting.
2. A government would be susceptible to undue politic influences both from special interest groups and for re-enforcing current government policy objectives.
3. Government is noted for their inflexibility and general lack of responsiveness on a timely basis to meet changing conditions. If the government were to assume prime responsibility, any incentive for the accounting profession to contribute to the standard setting process would be significantly reduced.
4. Government standard setting would harm the vitality of the accounting profession, decreasing the supply of professional talent devoted to standards setting and turning accountants away from independent auditing and toward client advocacy.
5. A private sector standard setting body would be more responsive to the needs of diverse interests; more appreciative of the complexities of modern business, hence more tolerant of judgemental decisions on the part of accounting practitioners; and more sensitive to the costs of providing and using information.

The standard setting by private sector bodies involve some problems. Firstly, private sector standard setting body are susceptible to charges of inefficiency and are vulnerable to 'capture' by those who are supposed to be under their control. Secondly, standard setting in the private sector may be influenced by vested individual interests and thus may not obviously aid the social welfare. Thirdly, standards set by private sector body do not command a force of law but depend only on voluntary acceptance. In this way, there will be no compliance with accounting standards.

Standard Setting by Agency

As stated earlier, the standard setting task could be done by government or a private sector body. However, both the alternatives have problems. In accounting literature, it is now argued that government should delegate most, if not all, accounting decisions to some agency. In USA, at present, government has delegated the power to set accounting standards to a number of agencies, notably the Securities and Exchange Commission. In France, Australia and New Zealand also, government-backed agencies function. However, in more countries, such government-backed agencies are not found. Regulation of the securities industries is also the major task of the SEC of USA's.

It appears that a governmental agency may prove useful as compared to standard setting in public sector and private sector. Such an agency would have the clear and explicit support of the government and the legislature. Therefore, all advantages which are claimed in favour of government as a standard setter, also accrue to such agencies. The Agency may have technical expertise and may employ qualified professionals to handle the technical matters than that of private sector accounting standard setting bodies. Such agencies should be able to promulgate accounting regulations and standards in a more speedy and efficient way than the government. The standard setting task by Agency would not imply large cost and would ensure compliance to standards. Such an agency may be more independent than a public sector or private sector body and can draw majority of its members from the concerned areas. Also, it would be accountable to society than any private sector bodies. To make such an agency accountable to society, it may be provided that it should prepare an annual report describing its activities during the period under review.

Some fears have been expressed about a government-backed agency as standard setter. It is contended that agency's functioning may be arbitrary. The government may broadly delineate the powers, principles and concepts within which the agency, may be empowered to act. However, the staff of the agency may not be as careful as needed in standard setting task. The American SEC has not been able to create much confidence towards its activities and has been regarded a conservative force in accounting area and has in its judgements often acted in its own interests. Such agencies are very susceptible to political pressure, government pressure and even to lobbying from vested groups. Bromwich argues:

"It is not so much actual intervention by superior bodies that may restrict the freedom of subordinate agencies. It is rather the knowledge that those discontented with, or jealous of an agency's activities may seek to challenge them by putting pressure on more authoritative bodies. Defensive actions to protect such agencies

against these challenges include utilising procedures which are neutral between individuals and efforts to discover a strong intellectual framework can be seen. Responses of this type take considerable time and resources and are likely to retard the agency's progress with its real tasks."

It is difficult to answer categorically that standard setting should be done by government or private sector body or government backed agency. In a country like India where accountancy profession is not yet fully developed it may not be advisable to assign the private sector the tasks of standard setting. In USA, standard setting is done by FASB, a private sector organisation, but SEC also contributes to the formulation of accounting policies. Standard setting through a government body is fraught with many dangers as the government may be doing measurement to serve its own purposes and uses. Similarly standard setting purely in private sector may be influenced greatly by business groups and other vested interests. To follow a middle path, a standard setting agency should be set up with an organisation, independent from governmental and private influences, and well structured, which could concentrate on objective accounting measurements and determination of business profit. Its working and process of developing standards should neither be influenced by governmental interests nor private interests. This will ensure that standards developed would be correct, acceptable to the financial community and preserve the credibility of financial statements.

DIFFICULTIES IN STANDARD SETTING

Difficulties faced in standard setting may vary from country to country as there may be differences in economic, legal, social and accounting environment. However, there are some problems which seem to be common to all standard-setter. They may be listed as follows:

1. **Conflict in Accounting Theories.** There has been a remarkable growth in accounting theories especially relating to income measurement, asset valuation, capital maintenance. Though much of the developments has taken place abroad, (USA, UK, Canada, Australia etc.), accounting in other countries has also been influenced. While the theorists battled on, the various sectional interests found that the theories could be used to support their own causes and arguments. At present, there is not a single theory in accounting which commands universal acceptance and recognition. There is no best answer to the different terms like profit, wealth, distributable income, value, capital maintenance and so forth. We cannot say what is the best way to measure profit. If the profession truly wishes to be helpful it needs to discover from users, or to suggest to them, what would support their decision making, and then to develop the measured which best reflect these ideas.

The search for an agreed conceptual framework could be regarded as essential to orderly standard setting and a responsible way for the standard-setter to act. Also, it could be helpful in distracting critics while getting on with the real issues in accounting problems. Absence of a conceptual framework, *i.e.*, a set of interlocking ideas on accountability and measurement is not conducive to standard setting and improved financial accounting and reporting.

2. **Political Bargaining in Standard Setting.** Earlier, but not so many years ago, accounting could be thought of as an essentially nonpolitical subject. But, today, as the standard setting process reveals, accounting can no longer be thought of as nonpolitical. The numbers that accountants report, have a significant impact on economic behaviour. Accounting rules therefore affect human behaviour. The stories conveyed by annual reports confirm or disappoint investor expectations and have the power to move millions (whether of money or persons). For all the bloodless image that accounting may have, people really care about the way the financial score is kept. Hence, the process by which they are made is said to be political. Horngreen writes that:

"The setting of accounting standards is as much a product of political action as of flawless logic or empirical findings. Why? Because the setting of standards is a social decision. Standards place restrictions on behaviour; therefore, they must be accepted by the affected parties. Acceptance may be forced or voluntary or some of both. In a democratic society, getting acceptance is an exceedingly complicated process that requires skilful marketing in a political arena."

Tweedie and Whittington observe: "Accounting standard setting is certainly a political process, responding to pressures from the economic environment and compromising between the conflicting interests of different parties. It is important that standard-setters be aware of this and that they be aware of the specific pressures and interests involved. It would be unrealistic to expect to determine standards without such difficulties, and the best way to deal with them is to admit their existence rather than pretending to ignore them."

3. **Difficulties in Definition.** To agree on the scope of accounting and of principles or standards is admittedly

most difficult. Some, for example, equate accounting with public accounting, that is mainly with auditing and the problems of the auditor. Another opinion is that it (accounting) is frequently assumed to have a basis in a private enterprise economy. Some use "principles" as a synonym for "rules or procedure." The result is that the number of principles become large and most uneven in coverage and in quality. Another group seems to equate "principles" with "convention," that is, with consensus or agreement. If this is the case, then a principle can be changed if all agree it should be or alternatively, the only propositions that can qualify as principles are those that command consensus or agreement. Such disagreement leads to difficulty in standard setting and further does not make the standards totally acceptable to society.

4. **Pluralism.** The existence of multiple accounting agencies has made the task of standard setting more difficult. In India, company financial reporting is influenced by, although in different degrees, by Accounting Standards Board of ICAI, Ministry of Law, Justice and Company Affairs, Institute of Cost and Works Accountants of India. No one agency has jurisdiction over the entire area of accounting standards. Similarly in other countries also, there is plurality of accounting bodies. For example, in USA, there are organisations like Securities and Exchange Commission, Financial Accounting Standards Board, American Institute of Certified Public Accountants. In U.K., there are Accounting Standards Board of ICAEW and Companies Acts to deal with accounting matters and financial reporting.

If pluralism were reduced or eliminated, the path toward the goal would be smoother. However, the absence of pluralism is not a necessary condition for agreement on standards developed by a single accounting body. No one would claim that the mere absence of an obstacle constitutes a sufficient condition for success.

A standard setter has to face many difficulties in standard setting process. In a rational way a standard setting body should first define the objectives of financial accounting and reporting, identify user groups to be served, and the information which were useful to them before starting the process of standard setting. A standard setting process, *i.e.*, the process of selecting the appropriate accounting method includes the following important stages:

1. **Identification and Assessment of Theory.** The various theories underlying alternative accounting methods should be examined for individual merit and internal consistency. In the light of the conceptual framework, the relevance of the alternative methods to the various users of accounts would be assessed.
2. **Research into the Costs and Benefits of Alternative Methods.** The role of research would be:
 - a. to examine the realism of the assumptions underlying the various methods;
 - b. to assess, and preferably quantify, the benefits accruing to users resulting from the introduction of each alternative method; and
 - c. to identify the costs and practical difficulties of implementation by field studies.
3. **Choice Between Alternative Methods.** The final stage of the process involves the exercise of judgement in the selection of an appropriate accounting policy. The standard-setting body is confronted by a social choice problem similar to that faced by a government in deciding how to allocate public expenditure and by which means taxes should be raised to pay for it. A choice may have to be made to favour certain groups of users at the expense of others, as ultimately the amount of information which can be published is limited. The decision involves the assessment of the benefits accruing to different users of accounts, and the costs associated with these benefits, bearing in mind that some of the users of accounts bear none of the costs. Ideally, the choice would be made from a 'neutral' viewpoint, but 'neutrality' can be determined in practice only if there exists a social welfare function for comparing various costs and benefits to different parties in manner which is universally accepted as being 'neutral.'

STANDARDS SETTING IN DIFFERENT COUNTRIES

Standards setting or standardisation imply the development, definition and promulgating, acceptance, and enforcement of a written and explicit body of rules relating to measurement and disclosure of information in financial statements. Prior to the 1970s, few paid much attention to the standard-setting process in accounting. Little research was done on the subject. Beginning in the 1970s, however, it became clear that standard setting was a fascinating process influencing the economic self-interests of affected parties. Currently, standard-setting boards or committees are active in a number of countries such as the United States, Canada, United Kingdom, Australia, New Zealand, Japan, the Netherlands, including India. The purpose of each of these standard-setting organisations is to promote the dissemination of timely and useful financial information to investors and certain other parties having an interest in companies' economic performance.

In the following sections, the process of standard setting in USA, UK and India has been described.

UNITED KINGDOM

The first substantial British interest in the area of accounting policy making seems to have been seen in the 1940s. The underlying cause of this concern was discontent with the accounting establishment. The first committee of the Institute of Chartered Accountants of England and Wales (ICAEW) charged with laying down guidelines concerning accounting practice emerged as a by-product of a compromise which allowed Council to continue to be composed of mainly practicing members. However, upto 1960, there was little concern with the process of accounting policy making. There was some evidence of fresh thinking in the 1960s and a research committee was formed in 1964. The strong concern was felt by many academic accountants who suggested research programmes to explore the possibility of setting accounting standards. All these (and other) pressures led the ICAEW to issue a Statement of Intent on Accounting Standards in the 1970s. Subsequently, the Accounting Standards Committee (ASC) was established in 1970.

The ASC has been replaced by Accounting Standards Board (ASB) in 1990.

In establishing the ASC, the ICAEW stated its intention to advance accounting standards along five lines as follows.

1. Narrowing the areas of difference and variety of accounting practice. This was to be achieved by publishing authoritative statements on best accounting practice.
2. Disclosure of accounting bases. This was to be required when accounts include significant items whose values depend upon judgement.
3. Disclosure of departures from established definitive accounting standards.
4. Wider exposure for major proposals on accounting standards.
5. Continuing programme for encouraging improved accounting standards in legal and regulatory measures.

In seeking to meet its terms of reference the ASC set Statements, of Standard Accounting Practice (SSAPs) by a process which entailed effectively four elements: research; drafting; evaluation; and approval. Similar characteristics determined the preparation of another type of document which was introduced by the ASC, 'the Statement of Recommended Practice (SORP). SORPs were designed to apply to matters of less general applicability than SSAPs and could be produced, by the ASC itself or by groups of organizations representing an economic sector. In the case of the latter, if SORPs were judged to have been properly prepared they would be franked by the ASC.

Following a continuing concern that the standard setting process needed a thorough revision the accounting bodies in 1987 set up a review committee, named after its chairman, Sir Ron Bearing, to review procedures for developing and enforcing accounting standards in Great Britain and Ireland. The Dearing Report recommended the establishment of a new body, the Financial Reporting Council (FRC). This was to oversee two independent entities, the Accounting Standards Board (ASB) and the Review Panel. These recommendations were accepted and implemented, with effect from August 1990.

The FRC, comprising 20 members, gives guidance to the ASB on priorities, work programme and issues of public concern, and acts as an instrument for promoting good accounting practice. The ASB comprises nine members, including a full-time chairman and technical director. An Urgent Issues Task Force (UITF) is an offshoot of the ASB. Its role is to tackle urgent matters not covered by existing standards. The Review Panel has fifteen members. It is concerned with monitoring the accounts of large companies to note and investigate any departure from accounting standards. In the last resort, the Review Panel may bring civil proceedings against a company which will not revise its accounts in order to give a true and fair view.

In 1991 the ASB published its "Statement of Aims" which stated that it aims to establish and improve standards of financial accounting and reporting, for the benefit of users, preparers and auditors of financial information. The Board, intends to achieve its aims by:

1. Developing principles to guide it in establishing standards and to provide a framework within which others can exercise judgement in resolving accounting issues.
2. Issuing new accounting standards, or amending existing ones, in response to evolving business practices, new economic developments and deficiencies being identified in current practice.
3. Addressing urgent issues promptly.

The Board follows certain guidelines in conducting its affairs.

1. To be objective and to ensure that the information resulting from the application of accounting standards faithfully represents the underlying commercial activity. Such information should be neutral in the sense that it

is free from any form of bias intended to influence users in a particular direction and should not be designed to favour any group of users or preparers.

2. To ensure that accounting standards are clearly expressed and supported by a reasoned analysis of the issues.
3. To determine what should be incorporated in accounting standards based on research, public consultation and careful deliberations about the usefulness of the resulting information.
4. To ensure that a process of regular communication of accounting standards is produced with due regard to international developments.
5. To ensure that there is consistency both from one accounting standard to another and between accounting standards and company law.
6. To issue accounting standards only when the expected benefits exceed the perceived costs. The Board recognizes that reliable cost/benefit calculations are seldom possible. However, it will always assess the need for standards in terms of the significance and extent of the problem being addressed and will choose the standard which appears to be most effective in cost benefit terms.
7. To take account of the desire of the financial community for evolutionary rather than revolutionary change in the reporting process, where this is consistent with the objective outlined above.

In 1983 the Accounting Standards Committee (ASC) obtained a written opinion from counsel on the meaning of true and fair with particular reference to the role of accounting standards. The opinion states that financial statements will not be true and fair unless the information they contain is sufficient in quantity and quality to satisfy the reasonable expectations of the readers to whom they are addressed. But the expectations of the readers are likely to be influenced by the practices of accountants because, by and large, they will expect to get what they ordinarily get and that, in turn, will depend upon the normal practices of accountants. Therefore, the compliance with accepted accounting principles is treated as prima facie evidence that the financial statements are true and fair. The opinion states that since the function of the ASC is to formulate what it considers should be generally accepted accounting principles, the value of a Statement of Standard Accounting Practice to a court is:

- a. A statement of professional opinion which readers may expect in financial statements which are true and fair.
- b. That readers expect financial statements to comply with standards.

The opinion concludes, therefore, that financial statements which depart from standards may be held not to be true and fair, unless a strong body of professional opinion opts out of applying the standard. The Companies Act 1989 introduced a requirement to state whether the accounts have been prepared in accordance with applicable accounting standards and give details of, and the reasons for, any material departures.

In its first 10 years, 1970-80, the ASC issued 18 standards. the ASC (now ASB) has so far issued 25 accounting standards although all standards are not operative.

Appendix A shows the list of standards issued so far by UK's ASC and ASB.

Statement of Standard Accounting Practices (SSAPs), which are produced mainly by a committee after a period of exposure and comment on the proposed statements, are mandatory for all qualified accountants involved in producing company financial statements. Such accountants (preparers) must ensure that stated standards are implemented by the companies by whom they are employed, unless circumstances dictate that there should be a departure; in which case, this has to be fully disclosed in the published financial statements. Company auditors are also required to verify that companies have been following standard accounting practice, and to report any disagreement with the departures made.

Despite these impositions on accountants, however, statements of standard accounting practices (SSAPs) are not mandatory on the persons ultimately responsible for the production and quality of financial statements (company directors), unless they also happen to be accountants to whom the statements apply. Thus it appears to be quite conceivable that company managements can deviate from the stated accounting standards, irrespective of the circumstances, though this will require to be verified by their auditors. In other words, professional statements of this kind do not appear to have the same force as those contained in statutory provisions such as the Companies Acts. The onus for implementation appears to be largely with individual accountants. However Part II Schedule and Companies Act 1948 and Companies Acts of 1980 and 1981, contain most of the main accounting principles underlying the present series of SSAPs. Also, SSAPs intended to add to truth and fairness are effectively to be considered by the company and its management when preparing its financial statements. Thus, those persons responsible for presenting company financial statements cannot ignore such SSAPs. But the ASC, whose authority is not backed by a government agency like SEC in USA has to rely on acceptance of its pronouncements on the existence of a consensus of views among practicing accountants, industry, commerce, and on occasion, the government.

U.S.A.

In USA until the early 1930's accounting evolved in accordance with the best professional judgement of CPAs and managers. Heavy dependence was placed on the leadership of thoughtful practitioners. Then, the Securities and Exchange Commission (SEC) was created in 1934 to administer the Securities Act of 1933 and the Securities Exchange Act of 1934. The Commission is given the responsibility and authority to prescribe accounting standards and rules for reports filed pursuant to the securities acts. Further, the Commission defines the conditions under which public accountants who attest to the statements are considered independent, and disciplines attesting accountants who violate these conditions. In 1936, the American Institute of Certified Public Accountants (AICPA) established a Committee on Accounting Procedure. The AICPA devoted its attention almost entirely to resolving specific accounting problems and topics rather than developing general accounting principles.

The Accounting Principles Board (APB) succeeded the Committee on Accounting Procedure of AICPA in 1959. The APB was created partially in response to criticism of the old Committee as being too concerned with putting out brush-fires, as being too wedded to an ad-hoc approach that lacked an overall conceptual framework. In contrast, the APB pronouncements were supposed to sprout from fundamental research that would formulate a grand set of tightly integrated, internally consistent accounting principles. Indeed, the APB commissioned such research, but the APB's series of 31 opinions was often criticised for being unrelated to any overall framework. Despite the good intention of the APB programme, history repeated itself. The APB approach was similar to the piecemeal approach of its predecessor. In fact, the Wheat Study Group that gave the APB the kiss of death devoted a section of its report to a negative appraisal of the APB research Programme. Of course, this kind of criticism of the APB flowed from many other sources. For instance, the academic community and many practitioners flayed the APB because it was working without any accounting objectives or any collection of general principles. In short, observers alleged that there was not enough tidy rationality embedded in the process of accounting policy making.

As a result of the criticism of the Accounting Principles Board the Financial Accounting Standards Board was set up in 1972 as a designated organisation in the private sector for establishing standards of financial accounting and reporting in D.S.

Financial Accounting Standards Board (FASB)

In October 1985, the FASB issued a statement of what it conceived to be its mission: "to establish and improve standards of financial accounting and reporting for the guidance and education of the public including issuers, auditors, and users of financial information."²¹ The statement further says that the Board seeks to accomplish its mission by the following measures:

1. Improving the usefulness of financial reporting by focusing on certain primary characteristics (relevance, reliability, comparability, and consistency).
2. Keeping standards up to date.
3. Considering areas of financial reporting that need improvement.
4. Improving the general understanding of financial reporting, its nature, and its purposes.

In pursuing these aims, the Board says that it follows the following precepts:

1. To be objective in its decision making and preserve neutrality in the information that results from its standards.
2. To weigh the views of its constituents but ultimately to rely on its own judgement.
3. To issue standards only when benefits are, expected to exceed costs.
4. To minimise disruption when making needed changes.
5. To review past decisions and to make changes when necessary.

Before the FASB promulgates a major standard, it is required by its rules to follow "extensive due process" procedures that gives those concerned with the subject matter of the standard plenty of opportunity to influence the outcome of the Board's deliberations. In connection with each of its major standards, the Board:

- a. appoints a task force of technical experts representing a broad spectrum of preparers, auditors and users of financial information to advise on the project.
- b. studies existing literature on the subject and conducts such additional research as may be necessary
- c. publishes a comprehensive discussion of issues and possible solutions as a basis for public comment
- d. conducts a public hearing.

- e. After the results of the public hearing and other responses have been analysed by the Board's staff and have been considered by the Board, an exposure draft of a proposed standard is issued for the public comment and 90 to 120 days are allowed for comment. If the comments indicate that substantial revisions of the exposure draft are necessary, a second exposure draft may be issued, with further time allowed for public comment.

The end product of the above elaborate and costly procedure is the promulgation of a statement of financial accounting standards (SFAS). Besides the formal statements, the Board also issues, Statements of Concepts, Interpretations, Technical Bulletins. Statements of Standard establish new standards or amend those previously issued. Statements of concepts do not establish new standards or require any change in application of existing accounting principles. They establish new general concepts that will be used to guide the development of standards, and to provide guidance in solving problems. Because of their long range importance, Statements of Concepts are developed under the same extensive 'due process' the FASB must follow in developing Statements of Financial Accounting Standards on major topics. Interpretations clarify, explain or elaborate on existing standards. Since 1979, the Board's staff has been authorised to issue technical bulletins giving guidance on the interpretation of a standard. These (bulletins) have to be reviewed by the Board members before they are issued, but they are not pronouncements by the Board. The Board has carried out many research projects also.

Appendix A exhibits Statement of Financial Accounting Standards (SFASs) and Statement of Financial Concepts (SFACs) issued by FASB to date.

Enforcement of Standards

The FASB itself, as a private rule making agency, has neither enforcement powers, nor the Financial Accounting Foundation. The force behind the FASB's standards comes from two other bodies, the SEC and the AICPA. A few months after the establishment of the FASB in 1973, the SEC issued ASR ISO, and it is from that release that the FASB derives most of its authority. ASR 150 stated that "for purposes of this policy, principles, standards and practices promulgated by the FASB in its statements and interpretations will be considered by the Commission as having substantial authoritative support, and there contrary to such FASB promulgations will be considered to have no such support." More recently, in ASR 280 (September 1980), the SEC reaffirmed its intention to rely on the FASB "for leadership in establishing financial accounting and reporting standards," while recognising that "there is, of course, always the possibility that the Commission (SEC) may conclude it cannot accept the FASB standard in a particular area (but) such events have been rare."

Similarly, FASB derives authority from the Rules 203 and 204 of the Rules of Conduct of the AICPA's Code of Professional Ethics. Rule 203 places a duty on auditors to report on departures from FASB standards in financial statements audited by them. An Interpretation of Rule 203 states categorically that rule "relates solely to the provisions of Statements of Financial Accounting Standards (SFASs) which establishes accounting principles with respect to basic financial statements (balance sheets, statements of income, statement of changes in retained earnings, disclosure of changes in other categories of stockholders-equity, statements of changes in financial position, and descriptions of accounting policies and related notes)." SFASs that stipulate that certain information should be disclosed outside the basic financial statements are not covered by Rule 203. However, Rule 204 gives authority to pronouncements of the FASB on such matters.

The SEC has statutory authority to establish financial accounting and reporting standards for publicly held companies under the Securities Exchange Act of 1934. Throughout its history, however, the Commission's policy has been to rely on the private sector for this function to the extent that the private sector demonstrates ability to fulfill the responsibility in the public interest. Since its inception, the approach of the Commission has been to delegate its authority, import, to the private accounting profession to determine subject to its oversight the proper disclosure and measurement rules. The Commission's hesitation probably stems from its realisation that the costs potentially incurred would exceed the benefits to it as an agency. The costs include disagreements among the constitutions (e.g., accountants, auditors, investors, financial analysts, brokers, companies, press, government, legislators) as to which standards to apply. The commission perhaps also realises that general content standards that imply economic measurements are open to potential criticisms. While the Commission (SEC) has steadfastly maintained its general policy of reliance on the accounting profession for accounting standard setting, it has nevertheless not adopted a totally passive role. It has established presentation standards and a very large number of specific rules that attempt to govern almost every situation that has come to its attention. Thus, companies and public accounting; are faced with the expense of learning and following these regulations, while it is doubtful that users have achieved much in the way of benefit. Benston stated that "The USA's experience with the SEC leads me to conclude that it is not likely that such an agency will or even can determine the optimal set of information to be disclosed or 'the best' accounting

standards to be followed. To the contrary, the agency has incentives to add considerable costs and few benefits to the disclosure process, and tends to do so."

Recently, a survey made about the attitudes towards the US Financial Accounting Standards Board shows that most of the financial community thought it produced too many standards, stressed technically correct solutions at the expense of practicability, did not consider significant areas of deficiency which could be improved by standard setting quickly enough and was not sufficiently responsive to the needs of small business. However, the survey also showed that over the last five years awareness and positiveness about FASB, its work and overall performance have increased. FASB statements were seen as effective since they improved on generally accepted accounting principles and dealt with the right issues.

Ass (UK) Vs. Fass (USA)

There are two main differences between the positions of the ASC (now ASB) and the FASB.

Firstly, SSAPs issued by ASB must have the approval of the governing councils of all six CCAB bodies before they can take effect. This procedure is not only cumbersome and time consuming, but it raises serious questions about the wisdom of giving veto powers to council members who may not have given much thought to the complex technical issues that ASC members have to grapple with.

The second difference between the ASC's and the FASB's position relates to enforcement. As Britain has no body corresponding to the SEC to give the ASC its blessing and authority, the committee has had to look to the stock exchange and the disciplinary powers of the Council over their members for such enforcement power as it has. Members acting as auditors are required to ensure that significant departures from ASC standards in financial statements are disclosed and are justified if their concurrence in the departure is stated or implied. The Stock Exchange makes it a condition of listing that, when an auditor qualifies his or her report in respect of a departure from an ASC standard, the company must explain its reasons for the departure to its shareholder. These disciplinary measures have not been entirely successful in giving the ASC the authority that it needs to be effective. As yet, enforcement remains an unsolved problem for the ASC²⁴. The authority of the ASC in UK, where there is no SEC to back it, is often flouted, in spite of the qualified audit reports that normally follow when financial statements not in accordance with the Committee's Statements of Standard Accounting Practice are issued.

For all practical purposes, SSAPs are like the FASB's statements of Financial Accounting Standards (SFASs). though, they have been considerably less numerous. In its first 10 years period, 1970-80, the ASC issued 18 standards, whereas the FASB, in its 10 years period, from mid 1973 to mid 1983, issued 72 standards and a number of interpretations in addition. To date, the ASC (ASB) has promulgated 25 standards, and the FASB, 110 standards. The FASB has also issued 38 Interpretations and 6 Statements of Concepts.

INDIA

Recognising the need to harmonise the diverse accounting policies and practice in India and keeping in view the international development in the field of accounting, The Institute of Chartered Accountants of India constituted the Accounting Standard Board (ASB) in April 1977. The ASB is entrusted with the following functions:

1. To formulate accounting standards which may be established by the Council of ICAI in India. While formulating standards, the ASB is required to take into consideration the applicable laws, customs and usages and business environment; it is also required to give due consideration to International Accounting Standards issued by IASC and to integrate them, to the extent possible, in the light of the conditions and practices prevailing in India.
2. To propagate the Accounting Standards and persuade the concerned parties to adopt them in the preparation and presentation of financial statements.
3. To issue guidance notes on the Accounting Standards and give clarifications on issues arising therefrom.
4. To review the Accounting Standards at periodical intervals.

The date from which a particular standard will come to effect, as well as the class of enterprises to which it will apply will also be specified by the Institute. Unless otherwise stated, no standard will have retrospective application. Normally before formulating the standards, ASB will hold discussions with the representatives of the Government, Public Sector Undertakings, Industry and other organisations, for ascertaining their view. An exposure draft of the proposed standard will be prepared and issued for comments by members of the Institute and the public at large. After considering the comments received, the draft of the proposed standard will be finalised by ASB and submitted

to the Council which will study it, modify it if necessary and issue it under its own authority.

Auditor's Duties in Relation to Accounting Standards

In case the company does not conform to any of the mandatory accounting standards, the auditor will have to qualify his report. In case he fails to do so the ICAI, can take disciplinary action against him on the grounds of professional misconduct.

Accounting Standards Issued by ASB of the Institute of Chartered Accountants of India

The Accounting Standards Board (ASB) of the Institute of Chartered Accountants of India has, in line with the International Standards, issued thirteen standards to be followed by its members while auditing the accounts of the companies. These standards are:

	Effective Date(s) Ist April of
AS-1 Disclosure of Accounting Policies	1991/93
AS-2 (R) Valuation of Inventory	1999
AS-3 (R) Cash Flow Statement	2001
AS-4 Contingencies and Events occurring after the Balance Sheet Date	1996
AS-5 (R) Net Profit or loss for the period, prior period items and changes in accounting policies	1996
AS-6 (R) Depreciation Accounting	1995
AS-7 Accounting for Construction Contracts	1995-2003
AS-7 (R) Construction Contracts	(1995-2003)
AS-8 Accounting for Research and Developments	(1991/93)
AS-9 Revenue Recognition	1991/93
AS-10 Accounting for fixed Assets	1991/93
AS-11 (R) Accounting for the effect of changes in foreign exchange rates	1995
AS-12 Accounting for governmental grants	1994
AS-13 Accounting for Investments	1995
AS-14 Accounting for Amalgamations	1995
AS-15 Accounting for retirement benefits in the financial statements of employers	1995
AS-16 Borrowing Cost	2000
AS-17 Segment Reporting	2001
AS-18 Related Party Disclosures	2001
AS-19 Accounting for Lease	2001
AS-20 Earning Per Share	2001
AS-21 Consolidated Financial Statements	2001
AS-22 Accounting for Taxes on Income	2001
AS-23 Accounting for investment in associates in Consolidated Financial Statements	2002
AS-24 Discontinuing operations	2004-05
AS-25 Interim financial Reporting	2002
AS-26 Intangible Assets	2003-04
AS-27 Financial Reporting for interest in joint venture	2002

APPLICABILITY OF ACCOUNTING STANDARDS

The Council, at its 236th meeting, held on September 16-18, 2003, considered the matter relating to applicability of Accounting Standards to Small and Medium Sized Enterprises (SMEs). The Council decided the following scheme for applicability of accounting standards to SMEs. This scheme comes into effect in respect of accounting periods commencing on or after 1-4-2004.

- I. For the purpose of applicability of Accounting Standards, enterprises are classified into three categories, viz., Level I, Level II and Level III. Level II and Level III enterprises are considered as SMEs. The criteria for different levels are given in Annexure I.

2. Level I enterprises are required to comply fully with all the accounting standards.
3. It has been decided that no relaxation should be given to Level II and Level III enterprises in respect of recognition and measurement principles. Relaxations are provided with regard to disclosure requirements. Accordingly, Level II and Level III enterprises are fully exempted from certain accounting standards which primarily lay down disclosure requirements. In respect of certain other accounting standards, which lay down recognition, measurement and disclosure requirements, relaxations from certain disclosure requirements are given. The exemptions/relaxations are decided to be provided by modifying the applicability portion of the relevant accounting standards. Modifications in the relevant existing accounting standards are given in Annexure II
4. Applicability of Accounting Standards and Exemptions/Relaxations for SMEs

So far, the Institute has issued 29 accounting standards. The applicability of the accounting standards and exemptions/relaxations for SMEs are as follows:

I. *Accounting Standards applicable to all enterprises in their entirety (Levels I, II and III)*

- i. AS 1, Disclosure of Accounting Policies
- ii. AS 2, Valuation of Inventories
- iii. AS 4, Contingencies and Events Occurring After the Balance Sheet Date
- iv. AS 5, Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies
- v. AS 6, Depreciation Accounting
- vi. AS 7 (revised 2002), Construction Contracts AS 7, (issued 1983), Accounting for Construction Contracts
- vii. AS 8, Accounting for Research and Development
- viii. AS 9, Revenue Recognition
- ix. AS 10, Accounting for Fixed Assets
- x. AS 11 (revised 2003), The Effects of Changes in Foreign Exchange Rates
AS 11 (revised 1994), Accounting for the Effects of Changes in Foreign Exchange Rates
- xi. AS 12, Accounting for Government Grants
- xii. AS 13, Accounting for Investments
- xiii. AS 14, Accounting for Amalgamations
- xiv. AS 15, Accounting for Retirement Benefits in the Financial Statements of Employers
- xv. AS 16, Borrowing Costs
- xvi. AS 22 Accounting for Taxes on Income
- xvii. AS 26, Intangible Assets

II. *Exemptions/Relaxations for SMEs*

- A. *Accounting Standards not applicable to Level II and Level III enterprises in their entirety*
 - i. AS 3, Cash Flow Statements
 - ii. AS 17, Segment Reporting
 - iii. AS 18, Related Party Disclosures
 - iv. AS 24, Discontinuing Operations
- B. *Accounting Standards not applicable to Level II and Level III enterprises since the relevant Regulators require compliance with them only by certain Level I enterprises.*
 - i. AS 21, Consolidated Financial Statements
 - ii. AS 23, Accounting for Investments in Associates in Consolidated Financial Statements
 - iii. AS 27, Financial Reporting of Interests in Joint Ventures (to the extent of requirements relating to consolidated financial statements)
- C. *Accounting Standards in respect of which relaxations from certain disclosure requirements have been given to Level II and Level III enterprises:*
 - i. AS 19, Leases

Paragraphs 22(c), (e) and (f); 25(a), (b) and (e); 37(a), (f) and (g); and 46(b), (d) and (e), of AS 19 are not applicable to Level II and Level III enterprises.

ii. AS 20, Earnings Per Share

As regards AS 20, diluted earnings per share and information required by paragraph 48 of AS 20 are not required to be disclosed by Level II and Level III enterprises if this standard is applicable to these enterprises because they disclose earnings per share. So far as companies are concerned, since all the companies are required to apply AS 20 by virtue of the provisions of Part IV of Schedule VI to the Companies Act, 1956, requiring disclosure of earnings per share, the position is that the companies which do not fall in Level I, would not be required to disclose diluted earnings per share and information required by paragraph 48 of AS 20.

iii. AS 29, Provisions, Contingent Liabilities and Contingent Assets

-Paragraph 67 is not applicable to Level II enterprises

-Paragraphs 66 and 67 are not applicable to Level II and Level III enterprises

The above relaxations are incorporated in AS 29 itself, which is published separately elsewhere in this Journal.

D. *Accounting Standard applicability of which is deferred for Level II and Level III enterprises:*

AS 28, Impairment of Assets

-For Level I Enterprises applicable from 1-4-2004

-For Level II Enterprises applicable from 1-4-2006

-For Level III Enterprises applicable from 1-4-2008

E. AS 25, Interim Financial Reporting, does not require any enterprise to present interim financial report. It is applicable only if an enterprise is required or debts to prepare and present an interim financial report. However, the recognition and measurement requirements contained in this Standard are applicable to interim financial results, e.g., quarterly financial results required by the SEBI.

At present, in India, enterprises are not required to present interim financial report within the meaning of AS 25. Therefore, no enterprise in India is required to comply with the disclosure and presentation requirements of AS 25 unless it voluntarily presents interim financial report within the meaning of AS 25. The recognition and measurement principles contained in AS 25 are also applicable only to certain Level I enterprises since only these enterprises are required by the concerned regulators to present interim financial results.

In view of the above, at present, AS 25 is not mandatory applicable to Level II and Level III enterprises in any case.

5. An enterprise which does not disclose certain information pursuant to the above exemptions/relaxations, should disclose the fact.
6. Where an enterprise has previously qualified for any exemption/relaxation (being under Level II or Level III), but no longer qualifies for the relevant exemption/relaxation in the current accounting period, the relevant standards/requirements become applicable from the current period. However, the corresponding previous period figures need not be disclosed.
7. Where an enterprise has been covered in Level I and subsequently, ceases to be so covered the enterprise will not qualify for exemption/relaxation available to Level II enterprises, until the enterprise ceases to be covered in Level I for two consecutive years. Similar is the case in respect of an enterprise, which has been covered in Level I or Level II and subsequently, gets covered under Level III.

ANNEXURE I

Criteria for Classification of Enterprises

Level I Enterprises

Enterprises which fall in anyone or more of the following categories, at any time during the accounting period, are classified as Level I enterprises:

- i. Enterprises whose equity or debt securities are listed whether in India or outside India.
- ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors' resolution in this regard.
- iii. Banks including co-operative banks.
- iv. Financial institutions.
- v. Enterprises carrying on insurance business.
- vi. All commercial, industrial and business reporting enterprises, whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include 'other income'.
- vii. All commercial, industrial and business reporting enterprises having borrowings, including public deposits, in excess of Rs.10 crore at any time during the accounting period.
- viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.

Level II Enterprises

Enterprises which are not Level I enterprises but fall in anyone or more of the following categories are classified as Level II enterprises:

- i. All commercial, industrial and business reporting enterprises, whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 40 lakhs but does not exceed Rs. 50 crore. Turnover does not include 'other income'.
- ii. All commercial, industrial and business reporting enterprises having borrowings, including public deposits, in excess of Rs.1 crore but not in excess of Rs.10 crore at any time during the accounting period.
- iii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.

Level III Enterprises

Enterprises which are not covered under Level I and Level II are considered as Level III enterprises.

Modifications in the relevant existing accounting standards to address the matter relating to Small and Medium Sized enterprises

ANNEXURE II

Modifications in the Relevant Existing Accounting Standards to Address the Matter Relating to Small and Medium Sized Enterprises

Note: Modifications are indicated as strike-throughs for deletions and as underlines for additions.

1. **Modifications in AS 3, Cash Flow Statements.** The 'applicability' paragraphs of AS 3 stand modified as under. Accounting Standard (AS) 3, 'Cash Flow Statements' (revised 1997), issued by the Council of the Institute of Chartered Accountants of India comes into effect in respect of accounting periods commencing on or after 1-4-1997. This Standard supersedes Accounting Standard (AS) 3, 'Changes in Financial Position' issued in June 1981. This Standard is mandatory in nature in respect of accounting periods commencing on or after 1-4-2004 for the enterprises which fall in anyone or more of the following categories at any time during the accounting period:
 - i. Enterprises whose equity or debt securities are listed whether in India or outside India.
 - ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors' resolution in this regard.
 - iii. Banks including co-operative banks.
 - iv. Financial institutions.
 - v. Enterprises carrying on insurance business.
 - vi. All commercial industrial and business reporting enterprises, whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore turnover does not include 'other income'.
 - vii. All commercial, industrial and business reporting enterprises having borrowings including public deposits in excess of Rs.10 crore at any time during the accounting period.

viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period. The enterprises which do not fall in any of the above categories are encouraged but are not required to apply this Standard.

Where an enterprise has been covered in anyone or more of the above categories and subsequently ceases to be so covered the enterprise will not qualify for exemption from application of this Standard until the enterprise ceases to be covered in any of the above categories for two consecutive years.

Where an enterprise has previously qualified for exemption from application of this Standard (being not covered by any of the above categories) but no longer qualifies for exemption in the current accounting period this Standard becomes applicable from the current period. However the corresponding previous period figures need not be disclosed.

An enterprise which pursuant to the above provisions does not present a cash flow statement, should disclose the fact.

The following is the text of the Accounting Standard.”

The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004. Accordingly, the announcement issued by the Council titled as ‘Accounting Standard (AS) 3, Cash Flow Statements Made Mandatory’, published in the December 2000 issue of the Institute’s Journal (page 65) stands withdrawn in respect of accounting periods commencing on or after 1-4-2004.

2. **Modifications in AS 17, Segment Reporting.** The ‘applicability’ paragraph of AS 17 stands modified as under:

Accounting Standard (AS) 17, ‘Segment Reporting’, issued by the Council of the Institute of Chartered Accountants of India comes into effect in respect of accounting periods commencing on or after 1.4.2001.

This Standard is mandatory in nature in respect of accounting periods commencing on or after 1-4-2004 for the enterprises which fall in anyone or more of the following categories at any time during the accounting period :

- i. Enterprises whose equity or debt securities are listed whether in India or outside India.
- ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors’ resolution in this regard.
- iii. Banks including co-operative banks.
- iv. Financial institutions.
- v. Enterprises carrying on insurance business.
- vi. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include ‘other income’.
- vii. All commercial industrial and business reporting enterprises having borrowings including public deposits in excess of Rs. 10 crore at any time during the accounting period.
- viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.

The enterprises which do not fall in any of the above categories are not required to apply this Standard.

Where an enterprise has been covered in anyone or more of the above categories and subsequently ceases to be so covered the enterprise will not qualify for exemption from application of this Standard until the enterprise ceases to be covered in any of the above categories for two consecutive years.

Where an enterprise has previously qualified for exemption from application of this Standard (being not covered by any of the above categories) but no longer qualifies for exemption in the current accounting period this Standard becomes applicable from the current period. However the corresponding previous period figures need not be disclosed.

An enterprise which pursuant to the above provisions does not disclose segment information should disclose the fact.

The following is the text of the Accounting Standard.

The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004.

3. **Modifications in AS 18, Related Party Disclosures.** The ‘applicability’ paragraph of AS 18 stands

modified as under:

Accounting Standard (AS) 18, 'Related Party Disclosures' issued by the Council of the Institute of Chartered Accountants of India comes into effect in respect of accounting periods commencing on or after 1-4-2004. This Standard is mandatory in nature in respect of accounting periods commencing on or after 1-4-2004 for the enterprises which fall in any one or more of the following categories at any time during the accounting period:

- i. Enterprises whose equity or debt securities are listed whether in India or outside India.
- ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors resolution in this regard.
- iii. Banks including co-operative banks.
- iv. Financial institutions.
- v. Enterprises carrying on insurance business.
- vi. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include 'other income'.
- vii. All commercial, industrial and business reporting enterprises having borrowings including public deposits in excess of Rs.10 crore at any time during the accounting period.
- viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.

The enterprises which do not fall in any of the above categories are not required to apply this Standard.

Where an enterprise has been covered in any one or more of the above categories and subsequently ceases to be so covered the enterprise will not qualify for exemption from application of this Standard until the enterprise ceases to be covered in any of the above categories for two consecutive years.

Where an enterprise has previously qualified for exemption from application of this Standard (being not covered by any of the above categories) but no longer qualifies for exemption in the current accounting period this Standard becomes applicable from the current period. However the corresponding previous period figures need not be disclosed.

An enterprise which pursuant to the above provisions does not make related party disclosures should disclose the fact.

The following is the text of the Accounting Standard.

The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004. Accordingly, the announcement issued by the Council titled as 'Applicability of Accounting Standard (AS) 18, Related Party Disclosures', published in the April 2002 issue of the Institute's Journal (page 1242) stands withdrawn in respect of accounting periods commencing on or after 1-4-2004.

4. **Modifications in AS 19, Leases.** The 'applicability' paragraph of AS 19 stands modified as under:

Accounting Standard (AS) 19, 'Leases', issued by the Council of the Institute of Chartered Accountants of India comes into effect in respect of all assets leased during accounting periods commencing on or after 1.4.2001 and is mandatory in nature from that date. Accordingly, the 'Guidance Note on Accounting for Leases' issued by the Institute in 1995, is not applicable in respect of such assets. Earlier application of this Standard is, however, encouraged.

In respect of accounting periods commencing on or after 1-4-2004, an enterprise which does not fall in any of the following categories need not disclose the information required by paragraphs 22(c), (e) and (f); 25(a), (b) and (e); 37(a), (f) and (g); and 46(b) (d) and (e), of this Standard:

- i. Enterprises whose equity or debt securities are listed whether in India or outside India.
- ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors' resolution in this regard.
- iii. Banks including co-operative banks.
- iv. Financial institutions.
- v. Enterprises carrying on insurance business.
- vi. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover

does not include 'other income'.

- vii. All commercial, industrial and business reporting enterprises having borrowings including public deposits in excess of Rs.10 crore at any time during the accounting period.
- viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.

In respect of an enterprise which falls in anyone or more of the above categories, at any time during the accounting period the Standard is applicable in its entirety.

Where an enterprise has been covered in anyone or more of the above categories and subsequently ceases to be so covered the enterprise will not qualify for exemption from paragraphs 22(c), (e) and (f); 25(a), (b) and (e); 37(a), (f) and (g); and 46(b), (d) and (e), of this Standard, until the enterprise ceases to be covered in any of the above categories for two consecutive years.

Where an enterprise has previously qualified for exemption from paragraphs 22(c), (e) and (f); 25(a), (b) and (e); 37(a), (f) and (g); and 46(b), (d) and (e), of this Standard (being not covered by any of the above categories) but no longer qualifies for exemption in the current accounting period this Standard becomes applicable in its entirety, from the current period. However the corresponding previous period figures in respect of above paragraphs need not be disclosed.

An enterprise which pursuant to the above provisions does not disclose the information required by paragraphs 22(c), (e) and (f); 25(a), (b) and (e); 37(a), (f) and (g); and 46(b), (d) and (e) should disclose the fact.

The following is the text of the Accounting Standard." The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004.

5. **Modifications in AS 20, Earnings Per Share.** The 'applicability' paragraph of AS 20 stands modified as under:

"Accounting Standard (AS) 20, 'Earnings Per Share', issued by the Council of the Institute of Chartered Accountants of India, comes into effect in respect of accounting periods commencing fort or after 1-4-2001 and is mandatory in nature, from that date, in respect of enterprises whose equity shares or potential equity shares are listed on a recognised stock exchange in India.

An enterprise which has neither equity shares nor potential equity shares which are so listed but which discloses earnings per share, should calculate and disclose earnings per share in accordance with this Standard from the aforesaid date. However in respect of accounting periods commencing on or after 1-4-2004¹ if any such enterprise does not fall in any of the following categories it need not disclose diluted earnings per share and information required by paragraph 48 of this Standard:

- i. Enterprises whose equity securities or potential equity securities are listed outside India and enterprises whose debt securities (other than potential equity securities) are listed whether in India or outside India.
- ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors resolution in this regard.
- iii. Banks including co-operative banks.
- iv. Financial institutions.
- v. Enterprises carrying on insurance business.
- vi. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include 'other income'.
- vii. All commercial industrial and business reporting enterprises having borrowings including public deposits in excess of Rs.10 crore at any time during the accounting period.
- viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.

Where an enterprise (which has neither equity shares nor potential equity shares which are listed on a recognised stock exchange in India but which discloses earnings per share) has been covered in anyone or more of the above categories and subsequently ceases to be so covered the enterprise will not qualify for exemption from the disclosure of diluted earnings per share and paragraph 48 of this Standard until the enterprise ceases to be covered in any of the above categories for two consecutive years.

Where an enterprise (which has neither equity shares nor potential equity shares which are listed on a

recognised stock exchange in India but which discloses earnings per share) has previously qualified for exemption from the disclosure of diluted earnings per share and paragraph 48 of this Standard (being not covered by any of the above categories) but no longer qualifies for exemption in the current accounting period, this Standard becomes applicable in its entirety from the current period. However the relevant corresponding previous period figures need not be disclosed.

If an enterprise (which has neither equity shares nor potential equity shares which are listed on a recognised stock exchange in India but which discloses earnings per share) pursuant to the above provisions does not disclose the diluted earnings per share and information required by paragraph 48 it should disclose the fact.

The following is the text of the Accounting Standard.”

The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004.

6. **Modifications in AS 24, Discontinuing Operations.** The ‘applicability’ paragraph of AS 24 stands modified as under:

“Accounting Standard (AS) 24, ‘Discontinuing Operations’, issued by the Council of the Institute of Chartered Accountants of India, comes into effect in respect of accounting periods commencing on or after 1-4-2004. This Standard is mandatory in nature in respect of accounting periods commencing on or after 1-4-2004 for the enterprises which fall in anyone or more of the following categories at any time during the accounting period:

- i. Enterprises whose equity or debt securities are listed whether in India or outside India.
- ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors resolution in this regard.
- iii. Banks including co-operative banks.
- iv. Financial institutions.
- v. Enterprises carrying on insurance business.
- vi. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include ‘other income’.
- vii. All commercial, industrial and business reporting enterprises having borrowings including public deposits in excess of Rs. 10 crore at any time during the accounting period.
- viii. Holding and subsidiary enterprises of any one of the above at any time during the accounting period.

Earlier application is encouraged.

The enterprises which do not fall in any of the above categories are not required to apply this Standard.

Where an enterprise has been covered in anyone or more of the above categories and subsequently ceases to be so covered the enterprise will not qualify for exemption from application of this Standard until the enterprise ceases to be covered in any of the above categories for two consecutive years.

Where an enterprise has previously qualified for exemption from application of this Standard (being not covered by any of the above categories) but no longer qualifies for exemption in the current accounting period, this Standard becomes applicable from the current period. However the corresponding previous period figures need not be disclosed.

An enterprise which pursuant to the above provisions does not present the information relating to the discontinuing operations should disclose the fact.

The following is the text of the Accounting Standard.”

The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004. Accordingly, the announcement issued by the Council titled as ‘Accounting Standard (AS) 24, Discontinuing Operations’, published in the May 2002 issue of the Institute’s Journal (page 1378) stands withdrawn in respect of accounting periods commencing on or after 1-4-2004, and is mandatory in nature from that date for the following.

7. **Modifications in AS 28, Impairment of Assets.** The ‘applicability’ paragraphs of AS 28 stand modified as under:

“Accounting Standard (AS) 28, ‘Impairment of Assets’, issued by the Council of the Institute of Chartered Accountants of India, comes into effect in respect of accounting periods commencing on or after 1-4-2004.

This Standard is mandatory in nature in respect of accounting periods commencing on or after:

- a. 1-4-2004, for the enterprises which fall in anyone or more of the following categories at any time during the accounting period:
 - i. Enterprises whose equity or debt securities are listed whether in India or outside India.
 - ii. Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors resolution in this regard.
 - iii. Banks including co-operative banks.
 - iv. Financial institutions.
 - v. Enterprises carrying on insurance business.
 - vi. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include 'other income'.
 - vii. All commercial, industrial and business reporting enterprises having borrowings including public deposits in excess of Rs. 10 crore at any time during the accounting period.
 - viii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.
- b. 1-4-2006, for the enterprises which do not fall in any of the categories in (a) above but fall in anyone or more of the following categories:
 - i. All commercial industrial and business reporting enterprises whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 40 lakhs but does not exceed Rs. 50 crore. Turnover does not include 'other income'.
 - ii. All commercial industrial and business reporting enterprises having borrowings including public deposits in excess of Rs. 1 crore but not in excess of Rs. 10 crore at any time during the accounting period.
 - iii. Holding and subsidiary enterprises of anyone of the above at any time during the accounting period.
- c. 1-4-2008, for the enterprises which do fall in any of the categories in (a) and (b) above.
 Earlier application of the Accounting Standard is encouraged.
 The following is the text of the Accounting Standard."
 The above modifications come into effect in respect of accounting periods commencing on or after 1-4-2004.

Note: In all the above modifications, the footnote clarifying the implications of 'mandatory' status of an accounting standard, will continue to appear whenever the word 'mandatory' is used for the first time as it present-day appears in the respective standards.

REASONS FOR SLOW PROGRESS MADE BY INDIAN ASB IN STANDARD SETTING

The Indian ASB's efforts in respect of accounting standards are not very satisfactory taking into account the work done in this area in USA, UK and other countries. Many factors are responsible for the slow progress of ASB in standards setting. Some such factors are as follows:

1. **Indifference Attitude.** The Institute of Chartered Accountants of India is expected to carry on two basic activities; (a) conducting chartered accountancy examination and preparing CAs to perform accounting and auditing function and (b) formulating accounting and auditing standards. The ICAI has devoted its major time in former activity and has not given required attention to the latter accounting activity. The ICAI has been evaluating its performance largely in terms of how ably it has succeeded in producing a large number of chartered accountants. As a result of it, the ASB could not act as an efficient accounting body and could not speed up the process of standard setting.
2. **Lack of Openness in Standard Setting.** The standard setting programme in India has not had a tradition of encouraging critics who are free to indulge in even handed criticism of its performance. A profession or a standard setter whose effectiveness depends on public confidence has a special obligation to retain that confidence through a conscious and deliberate effort to open itself to the public and acknowledge mistakes. It

is far better to be involved in an open system than in one where there is uncertainty as to what is being done and what arguments are most persuasive.

The ASB should act as an organisation of exciting people. The ASB cannot be above the arguments either before or after it has issued its standards and statements. The members of ASB should be out explaining their views, speaking on matters of substance. This would be very helpful both for the standard setting system and for reception of the ASB.

3. **Accountants and Auditors Preference for status quo.** It has been noticed that the accounting profession and the persons involved in it do not like changes for the sake of preserving the *status quo*, although some proposals may appear to be change for the sake of change. This is true not only of the accounting profession but other professions as well. However, there are some truths which the accounting profession should accept such as (a) Change is the order of time. Even if we were inclined to hold the past, it would be unrealistic to try it. (b) Profession has to change and adapt with developments in the larger economic and social worlds of which it (profession) is a part. (c) Inevitably there will be changes we do not like, but the accounting profession should be prepared to practice under conditions that are less favourable. The function performed by accounting profession is useful to society and serve the public interest.
4. **Government Intrusion in Financial Reporting Area.** In India there is found more government intrusion not only in business matters but in laws relating to company accounts and reporting. Government intervention has been justified as the accounting profession has failed to provide accounting leadership. Accounting profession needs people who can give political and technical leadership. Accounting leadership does not mean only reacting and resisting but exercising leadership and recognising leadership responsibilities.
5. **Accounting Research.** In India, in the past not much accounting research has been conducted and recently, whatever accounting researches have been done, have not been seriously considered by the standard setter in India. The ICAI appears to have its own preconceived notion on accounting and reporting issues and therefore does not pay due consideration to research finding.

Some may question the role of research in standard setting. Many academicians comment that the route from research findings to accounting policy making is quite confusing and often impossible. On the other hand, many practitioners claim that the research findings are inapplicable to important practical problems. These critics tend to be intolerant of any research that cannot be used in dealing with the next day's problem.

However, accounting research can contribute effectively to standards setting. The following writers support this view point forcefully:

According to Beaver and Demski:

"... research plays at least two roles: (1) to provide evidence on various aspects of V_i (the value of various financial reporting alternatives)... and (2) to provide evidence on the consequences of various mappings from V_i to V (the preferred alternative)... Of course none of this research will in and of itself resolve the fundamentally ethical question of how preferences should be weighted across individuals in determining financial reporting policies. We are, however, hopeful it will provide some information on what the consequences of alternative choices may be."

According to Mautz:

"Accounting research has a two-fold function. First it must discover as best it can, and taking into account all available information, the theoretically preferred solution to the issue at hand. This requires development of an overall structure of theory so that the specific issue can be placed in perspective. Second, steps must be taken to determine just how far in the direction of that preferred solution a standard can go and still be acceptable to a majority of those concerned. What are the various interests? What impact will alternative solutions have upon them? Of the various solutions that can be reconciled with the overall theory, which provide the greatest total benefit at least cost?"

Beaver comments:

"Our role (as academicians) is to provide information for policy decisions concerning:

- a. What issues ought to be raised in considering a given financial reporting topic, and
- b. What the potential consequences are, given the existence research."

A FEW SUGGESTIONS

As stated earlier, there are many problems in standard Setting task. It is difficult to prepare a complete list of all

possible measures to strengthen the process of setting accounting standards and remove the weaknesses in the existing framework. However, some measures are suggested here. These suggestions are only tentative and are generally based on an accounting theory perspective and analysis of environmental variables. These deserve further analytical and empirical investigation. A continuous enquiry is also needed to suggest other and alternative reforms.

1. The Accounting Standards Board should consider all issues in an unbiased and objective way and should conduct parts of its deliberations in public. The ASB should not take the sides of any particular segment of society.
2. The enforcement of accounting standards is a difficult problem and requires proper investigation. It is argued that standards should have legal backing. In absence of legal mandate, business firms may not feel encouraged to follow standards. For this the Companies Act may be amended. In Canada it is provided in the law that any important financial documents required by the Government should follow contemporary accounting standards.
3. The Institute of Chartered Accountants of India should recognise the importance of standard setting and give it its due recognition and place among its diverse activities.
4. Accounting Standards Board should be reorganised and strengthened. As a better alternative, ASB should be made a separate organisation and should not work under the supervision and control of ICAI. This will ensure adequate attention toward standard setting and a free from bias functioning which is necessary in standard setting.
5. A suggestion has recently emerged in accounting literature to establish an Appeal Court for those who believe that standards issued are against the accepted 'true and fair' philosophy. It is said that standards which involve social and political choices cannot be justified solely using either theory or empirical evidence. Such an appeal system would be directly in an area which so far, atleast, has been left to the profession. More importantly, it would help to ensure that the whole compass of accounting standards is either consistent or that concepts used for one standard could be reasonably distinguished and any difference from other seemingly similar standards explained.
6. The standard setting requires consensus to satisfy all concerned parties through subsequent standards and statements. There are many difficulties in achieving consensus such as lack of intellectual and analytical analysis, permitting many solutions (some of which may not be desirable) to a given problem, causing delay in standard setting which results in a long-jam of accounting issues to be solved. This necessities, that the criteria of consensus in standard should be used with proper understanding and within defined limits. In a democracy, one must operate broadly within a consensus, but that does not mean that on every issue one must count the heads. Unanimity is not required for standard setting or policy making. Actions do have to be within the boundaries of a broad consensus, but that does not mean they cannot be near the boundaries. It seems, at present, the ASB is influenced greatly by business community and large audit firm. Large audit firms appear to have great impact on other activities of ICAI also.
7. A Review Committee should be set up to make an appraisal of standards after they have been formulated, to ensure that these standards are generally beneficial to the wider society and have been issued only after following a due process procedure. Review should not be done by the ASB itself. A separate body would allow the ASB to properly concentrate more on the technical and detailed aspects of preparing standards. The Review Committee would accept standards or refer them back to ASB. The Review Committee would thus act as a check and balance on ASB. If the ASB and the Review Committee, after negotiation could not agree, a joint sitting should be held and the matter should be resolved in the joint meeting.
8. The ASB should, in future, act as accounting leader in standard setting area. In our country, this task cannot be given to private sector standard setting body. Also, the government cannot handle this job with speed, flexibility and purposefulness. It seems that there will be no drastic changes in the current set up and the present method will continue. A body like Accounting Standards Board (ASB) can use the technical expertise of the whole accounting and auditing profession and therefore its technical solutions to accounting problems are likely to be better than those arrived at by civil servant experts. The ASB can easily and promptly maintain flexibility in accounting and reporting, whereas there could be too much delay on the part of government as financial reporting is not considered a hot political issue.
9. The ASB should undertake and/or commission a research study of the existing literature prior to undertaking a study of an accounting issue. This comprehensive research study should prepare and collect all arguments in favour of all related issues and sides. The standards setting done by the ASB and its staff without research

input would not be a useful proposition. Since standards setting is a continuous programme, the ASB should make a time table for research studies for a longer time period with a lead time sufficient not to delay the ASB's deliberations.

Bromwich argues:

"Such a mechanism would provide some authoritative monitoring of accounting standards and would document to some degree any learning experience concerning standards. This experience is not presently recorded in any formal way. This process would allow 'case' law to be built up without it becoming a burden on accounting policy makers. Such case law could, if necessary, always be overruled. Of greater importance, would be the Court's insistence on consistent reasoning between standards. This would allow a type of conceptual framework to be built up. Concepts found useful for one standard could a *priori* be expected to be used in similar setting with other standards. This could mitigate the tendency of accounting policy makers to approach each accounting problem in isolation from their deliberations over other standards. It would, for example, be of interest to consider the implications for other standards of applying to them the same concepts as used for the foreign exchange and the current cost accounting standards. Some possible conditions which allow the choice of an accounting standard for a given accounting problem to be made without considering the interaction with other standards on the welfare of the business community are known. They are, however fairly restrictive."

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CHAPTER-18

Elementary Knowledge of Indian Accounting Standards

The Institute of Chartered Accountants of India has so far issued the following Twenty Seven Standards:-

- AS 1 : Disclosure of Accounting Policies.
- AS 2 : Valuation of Inventories.
- AS 3 : Cast Flow Statements.
- AS 4 : Contingencies and events occurring after the Balance Sheet.
- AS 5 : Net Profit or Loss for the period, prior period items and changes in Accounting Policies.
- AS 6 : Depreciation Accounting.
- AS 7 : Accounting for Construction Contracts.
- AS 8 : Accounting for Research & Development.
- AS 9 : Revenue Recognition.
- AS 10 : Accounting for Fixed Assets.
- AS 11 : Accounting for the effects of changes in Foreign Exchange Rates.
- AS 12 : Accounting for Government Grants.
- AS 13 : Accounting for Investments.
- AS 14 : Accounting for Amalgamations.
- AS 15 : Accounting for Retirement Benefits in the Financial Statements of Employees.
- AS 16 : Borrowing Costs.
- AS 17 : Segment Reporting
- AS 18 : Related Party Disclosure.
- AS 19 : Accounting for Leases.
- AS 20 : Earnings per Share.
- AS 21 : Consolidated Financial Statements.
- AS 22 : Accounting for Taxes on Income.
- AS 23 : Associates in Consolidated Financial Statements.
- AS 24 : Discounting Operations.
- AS 25 : Interim Financial Reporting.
- AS 26 : Intangible Assets.

Highlights of these standards are given below:-

Accounting Standards-1: It deals with the disclosure of significant accounting policies followed in the preparation and presentation of financial statements. The areas in which accounting policies need disclosure include: methods of depreciation, depletion and amortization; treatment of expenditure during construction; conversion or translation of foreign currency items; valuation of inventories; treatment of goodwill; valuation of investments; treatment of retirement benefits; recognition of profit on long-term contracts; calculation of fixed assets; treatment of contingent liabilities, etc

The purpose of this standard is to promote a better understanding of financial statements by establishing the disclosure of significant accounting policies in the financial statements and the manner of doing so.

The major considerations governing the selection and application of accounting policies are prudence, substance over form and materiality.

Compliance with this standard should go a long way in facilitating a more meaningful comparison between financial statements of different enterprises.

Accounting Standard 2 (Revised) – Valuation of Inventories: The revised standard came into effect in respect of accounting periods commencing on or after April 1, 1999.

Scope The standard should be applied in accounting for inventories other than: (a) work in progress arising under construction contracts, including directly related service contracts (see Accounting Standard 7, Accounting for Construction Contracts; (b) work in progress arising in the ordinary course of business of service providers; (c) shares, debentures and other financial instruments held as stock-in-trade; and (d) producers' inventories of livestock, agricultural and forest products, and mineral oils, ores and gases to the extent that they are measured at net realizable value in accordance with the established practices in those industries.

Definitions: The following terms are used in this standard with the meanings specified.

Inventories are assets: (a) held for sale in the ordinary course of business; (b) in the process of production for such sale; or (c) in the form of materials or supplies to be consumed in the production process or in the rendering of services.

Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Measurement of Inventories: Inventories should be valued at the lower of cost and net realisable value.

Cost of Inventories: The cost of inventories should comprise all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

Cost Formulas: The cost of inventories of items that are not ordinarily interchangeable, and goods or services produced and segregated for specific projects should be assigned by specific identification of their individual costs.

The cost of inventories, other than those dealt with in the paragraph above, should be assigned by using the first-in, first-out (FIFO), or weighted average cost formula. The formula used should reflect the fairest possible approximation to the cost incurred in bringing the items of inventory to their present location and condition.

Disclosure: The financial statements should disclose: (a) the accounting policies adopted in measuring inventories, including the cost formula used; and (b) the total carrying amount of inventories and its classification appropriate to the enterprise.

Accounting Standard 3 (Revised) – Cash Flow Statements: In the initial years, this accounting standard will be recommendatory in character (all other standards are mandatory under Section 211 of the Companies Act.) During this period, this standard is recommended for use by companies listed on a recognized stock exchange and other commercial, industrial and business enterprises in the public and private sectors.

Scope: An enterprise should prepare a cash flow statement and should present it for each period for which financial statements are presented.

Definitions: The following terms are used in this standard with the meanings specified:

Cash: It comprises cash on hand and demand deposits with banks.

Cash equivalents: They are short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value.

Cash flows: They are inflows and outflows of cash and cash equivalents.

Operating activities: These are the principal revenue-producing activities of the enterprise and other activities that are not investing or financing activities.

Investing activities: These are the acquisition and disposal of long-term assets and other investments not included in cash equivalent.

Financing activities: These are activities that result in changes in the size and composition of the owners' capital (including preference share capital in the case of a company) and borrowing of the enterprise.

Presentation of a cash flow statement: The cash flow statement should report cash flows during the period classified by operating, investing and financial activities.

Reporting cash flow from operating activities: An enterprises should report cash flows from operating activities using either: (a) The direct method, whereby major classes of gross cash receipts and gross cash payments are disclosed; or (b) The indirect method, whereby profit or loss is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or expense associated with investing or financing cash flows.

Reporting cash flows from investing and financing activities: An enterprise should report separately major classes of gross cash receipt and gross cash payment arising from investing and financing activities, except to the extent that cash flows described in the following two paragraphs are reported on a net basis.

Cash flows arising from the following operating, investing or financing activities, may be reported on a net basis.

- (a) Cash receipts and payments on behalf or customers when the cash flows reflect the activities of the customer rather than those of the enterprise.
- (b) Cash receipts and payments for items in which the turnover is quick, the amounts are large, and the maturities are short.

Cash flows arising from each of the following activities of a financial enterprise may be reported on a cash basis.

- (a) Cash receipts and payments for the acceptance and repayment of deposits with a fixed maturity date;
- (b) The placement of deposits with and withdrawal of deposits from other financial enterprises; and
- (c) Cash advances and loans made to customers and the repayment of those advances and loans.

Foreign currency cash flows: Cash flows arising from transactions in a foreign currency, should be recorded in an enterprise's reporting currency, by applying to the foreign currency amount the exchange rate between the reporting currency and the foreign currency at the date of the cash flow. A rate that approximates the actual rate may be used if the result is substantially the same as would arise if the rates at the dates of the cash flows were used. The effect of changes in exchange rates on cash and cash equivalents held in a foreign currency should be reported as a separate part of the reconciliation of the changes in cash and cash equivalents during the period.

Extraordinary items: The cash flows associated with extraordinary items should be classified as arising from operating, investing or financing activities as appropriate and separately disclosed.

Interest and dividends: Cash flows from interest and dividends received and paid should each be disclosed separately. Cash flows arising from interest paid and interest and dividends received in the case of a financial enterprise should be classified as cash flows arising from operating activities. In the case of other enterprises, cash flows arising from interest paid should be classified as cash flows from financing activities while interest and dividends received should be classified as cash flows from investing activities. Dividends paid should be classified as cash flows from financing activities.

Taxes on income: Cash flows arising from taxes on income should be separately disclosed and should be classified as cash flows from operating activities unless they can be specifically identified with financing and investing activities.

Investments in subsidiaries, associates, and joint ventures: When accounting for an investment in an associate or a subsidiary or a joint venture, an investor restricts in reporting in the cash flow statement to the cash flows between itself and the investee/joint venture, for example, cash flows relating to dividends and advances.

Acquisitions and disposals of subsidiaries and other business units: The aggregate cash flows arising from acquisition and from disposals of subsidiaries or other business units should be presented separately and classified as investing activities.

An enterprises should disclose, in aggregate, in respect of both acquisition and disposal of subsidiaries and other business units during the period, each the following:

- (a) The total purchase or disposal consideration; and
- (b) The portion of the purchase or disposal consideration discharged by means of cash and cash equivalents.

Non-cash transactions: Investing and financing transactions that do not require the use of cash or cash equivalents

should be excluded from a cash flow statements. Such transactions should be disclosed elsewhere in the financial statements in a way that provide all the relevant information about these investing and financing activities.

Components of cash and cash equivalents: An enterprise should disclose the components of cash and cash equivalents and should present a reconciliation of the amounts in its cash flow statement with the equivalent items reported in the balance sheet.

Other disclosures: an enterprise should disclose, together with a commentary by management, the amount of significant cash and cash equivalent balances held by the enterprises that are not available for use by it.

Accounting Standard 4 (Revised) – Contingencies and Events Occurring after the Balance Sheet Date: This standard deals with the treatment in the financial statements of: (a) contingencies, and (b) events occurring after the balance sheet date.

The following subjects, which may result in contingencies, are excluded from the scope of this standard in view of special considerations applicable to them.

- (a) Liabilities of life assurance and general insurance enterprises arising from policies issued;
- (b) Obligations under retirement benefit plans; and
- (c) Commitments arising from long-term lease contracts.

Definitions: The following terms are used in this standard with the meanings specified:

Contingency: A contingency is a condition or a situation, the ultimate outcome of which, gain or loss, will be known or determined only on the occurrence, or non-occurrence, of one or more uncertain future events.

Events occurring after the balance sheet date: Events occurring after the balance sheet date are those significant events, both favourable and unfavourable, that occur between the balance sheet date and the date on which the financial statements are approved by the Board of Directors in the case of any other entity.

Two types of events can be identified:

- (a) Those which provide further evidence of conditions that existed at the balance sheet date; and
- (b) Those which are indicative of conditions that arose subsequent to the balance sheet date.

The amount of a contingent loss should be provided for by a charge in the statement of profit and loss if:

- (a) It is probable that future events will confirm that, after taking into account any related recovery, an asset has been impaired or a liability has been incurred as at the balance sheet date; and
- (b) A reasonable estimate of the amount of the resulting loss can be made.

The existence of a contingent loss should be disclosed in the financial statements if either of the conditions in the above paragraph is not met, unless the possibility of loss is remote.

Contingent gains should not be recognised in the financial statements.

Assets and liabilities should be adjusted for events occurring after the balance sheet date the provide additional evidence to assist the estimation of amounts relating to conditions existing at the balance sheet date, or that indicate that the fundamental accounting assumption of going concern (i.e. the continuance of existence or substratum of the enterprise) is not appropriate.

Dividends stated to be in respect of the period covered by the financial statements, which are proposed or declared by the enterprise after the balance sheet date but before approval of the financial statements, should be adjusted.

Disclosure should be made in the report of the approving authority of those events occurring after the balance sheet date that represent material changes and commitments affecting the financial position of the enterprise.

Disclosure: If disclosure of contingencies is required by the aforesaid paragraph, the following information should be provided: (a) the nature of the contingency; (b) the uncertainties which may affect the future outcome; (c) an estimate of the financial effect, or a statement that such an estimate cannot be made.

If the disclosure of events occurring after the balance sheet date in the report of the approving authority is required by the aforesaid paragraph of this standard, the following information should be provided: (a) the nature of the event; (b) an estimate of the financial effect, or a statement that such an estimate cannot be made.

This standard came into effect in respect of accounting periods commencing on or after April, 1995.

Accounting Standard 5 (Revised) – Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies: This revised standard came into effect in respect of accounting periods commencing on or

after April 1, 1996. This statement should be applied by an enterprise in presenting profit or loss from ordinary activities, extraordinary items and prior period items in the statement of profit and loss; in accounting for changes in accounting estimates, and in disclosure of changes in accounting policies.

Ordinary activities: These are any activities which are undertaken by an enterprise as a part of its business and such related activities in which the enterprise engages in the furtherance of, incidental to, or arising from, these activities.

Extraordinary items: These are income or expenses that arise from events or transactions that are clearly distinct from the ordinary activities of the enterprise and, therefore, are not expected to recur frequently or regularly.

Prior period items: These are income or expenses which arise in the current period as a result of errors or omissions in their preparation of financial statements of one or more periods.

Accounting policies: they are the specific accounting principles and the method of applying these principles adopted by an enterprise in the preparation and presentation of financial statements.

Net profit or loss for the period: All items of income and expenses which are recognized in a period, should be included in the determination of net profit or loss for the period, unless an accounting standard requires or permits otherwise.

The net profit or loss for the period comprises the following components, each of which should be disclosed on the face of the statement of profit and loss.

- (a) Profit or loss from ordinary activities, and
- (b) Extraordinary items.

Extraordinary items: These should be disclosed in the statement of profit and loss as a part of net profit or loss for the period. The nature and the amount of each extraordinary item should be separately disclosed in the statement of profit and loss in a manner that its impact on current profit or loss can be perceived.

Profit or loss from ordinary activities: When items of income and expenses within profit or loss from ordinary activities are of such size, nature, or enterprise for the period, the nature and amount of such items should be disclosed.

Prior period items: The nature and amount of prior period items should be separately disclosed in the statement of profit and loss in a manner that their impact on the current profit can be perceived.

Change in accounting estimate: The effect of a change in an accounting estimate should be included in the determination of net profit or loss in:

- (a) the period of the change, if the change affects the period only; or (b) the period of the change and future periods, if the change affects both.

The effect of a change in an accounting estimating should be classified using the same classification in the statement of profit and loss as was used previously for the estimate.

The nature and amount of change in an accounting estimate which has a material effect in the current period, or which is expected to have a material effect in subsequent periods, should be disclosed. If it is impracticable to quantify the amount, this fact should be disclosed.

Changes in accounting policies: A change in an accounting policy should be made only if the adoption of a different accounting policy is required by statute, or for compliance with an accounting standard, or if it is considered that the change would result in a more appropriate presentation of the financial statements of the enterprise.

Any change in an accounting policy which has a material effect should be disclosed. The impact of, and the adjustments resulting from, such a change, if material, should be shown in the financial statements for the period in which such a change is made, to reflect the effect of such change. Where the effect of such change is made in the accounting policies which has no material effect on the financial statements for the current period but which is reasonably expected to have a material effect in later periods, the fact of such change should be appropriately disclosed in the period in which the change is adopted.

Accounting Standards 6 (Revised) – Depreciation Accounting: This standard deals with depreciation accounting and applies to all depreciable assets, except the following items to which special considerations apply.

- (a) Forests, Plantations and similar regenerative natural sources;
- (b) Wasting assets including expenditure on the exploration for and extraction of minerals, oils, natural gas and similar non-regenerative resources;

- (c) Expenditure on research and development;
- (d) Goodwill;
- (e) Live stock,

This standard does not apply to land unless it has a limited useful life for the enterprise.

The depreciable amount of a depreciable asset should be allocated on a systematic basis to each accounting period during the useful life of the asset.

The depreciation method selected should be applied consistently from period to period. A change from one method of providing depreciation to another should be made only if the adoption of the new method is required by the statute, or for compliance with an accounting standard, or if it is considered that the change would result in a more appropriate preparation or presentation of the financial statements of the enterprise. When such a change in the method of depreciation is made, depreciation should be recalculated in accordance with the new method from the date of the asset coming into use. The deficiency or surplus arising from retrospective computation of depreciation in accordance with the new method should be adjusted in the accounts in the year in which the method of depreciation is changed. In case the change in the method results in deficiency in depreciation in respect of past years, the deficiency should be charged in the statement of profit and loss. In case the change in the method results in surplus, the surplus should be credited to the statement of profit and loss. Such a change should be treated as a change in accounting policy and its effect should be quantified and disclosed.

The useful life of a depreciable asset should be estimated after considering the following factors:

- (a) Expected physical wear and tear;
- (b) Obsolescence;
- (c) Legal or other limits on the use of the asset.

The useful lives of major depreciable assets or classes of depreciable assets may be reviewed periodically. Where there is a revision of the estimated useful life of an asset, the unamortized depreciable amount should be charged over the remaining useful life.

Any addition or extension which become an integral part of the existing asset should be depreciated over the remaining may also be provided at the rate applied to the existing asset. Where an addition or extension retains a separate identity and is capable of being used after the existing asset is disposed of, depreciation should be provided independently on the basis of an estimate of its own useful life.

Where the historical cost of a depreciable asset has undergone a change due to an increase or decrease in long term liability an account of exchange fluctuations, price adjustments, changes in duties or similar factors, the depreciation on the revised unamortized depreciable amount should be provided prospectively over the residual useful life of the asset.

Where the depreciable assets are revalued, the provision for depreciation should be based on the revalued amount and on the estimate of the remaining useful lives of such assets. In case the revaluation has a material effect on the amount of depreciation, the same should be disclosed separately in the year in which the revaluation is carried out.

If any depreciable asset is disposed of, discarded, demolished or destroyed, the net surplus or deficiency, if material, should be disclosed separately.

The following information should be disclosed in the financial statements:

- (a) The historical cost or other amount substituted for historical cost of each class of depreciable assets;
- (b) Total depreciation for the period for each class of assets; and
- (c) The related accumulated depreciation.

The following information should be disclosed in the financial statements along with the disclosure of other accounting policies.

- (a) Depreciation method used; and
- (b) Depreciation rates or the useful lives of the assets, if they are different from the principal rate specified in the statute governing enterprise.

Accounting Statement-7 deals with accounting for construction contracts in the financial statements of contractors (under revision).

The feature which best characterizes a construction contracts is the fact that the date on which the contract is secured and the date when the contract is completed fall into different accounting periods. Accounting for such

contracts is essentially a process of measuring the results of relatively long-term events, and allocating those results to relatively short-term accounting periods.

A construction contract is a contract for the construction of an asset or a combination of assets which together constitute a single project.

The principal problem relating to accounting for construction contracts is the allocation of revenues and related costs to accounting periods over the duration of the contract. Two methods of accounting for contracts commonly followed by contractors are the percentage of completion method and the completed contract method.

When there is change in the accounting policy used for construction contracts, the disclosure of the effect of change and its amounts should be made in the financial statements.

Accounting Standard-8 is concerned with accounting for research and development. This standard deals with the treatment of costs of research and development (R&D) in financial statements.

In order to achieve a reasonable degree of comparability between enterprises and between accounting periods of the same enterprise, it is necessary to identify the elements comprising R&D costs.

Accounts of R&D costs should be charged as an expense of the period in which they are incurred. R&D costs of a project may be deferred to future periods under certain conditions. If R&D costs are deferred, they should be allocated on a systematic basis to future accounting periods.

The total of R&D costs, including the amortized portion of deferred costs, charged as expense should be disclosed in the Profit and Loss Account for the period. Deferred R&D expenditure should be separately disclosed in the Balance Sheet under the head "Miscellaneous Expenditure".

The same accounting policy of deferral of R&D costs should be applied to all such projects that meet the criteria given in paragraph 9 of the AS-8.

Accounting Standard-9: Deals with the bases for recognition of revenue in the profit and loss statement of an enterprise. The statement is concerned with the recognition of revenue arising in the course of the normal activities of the enterprise from (1) the sale of goods, (2) the rendering of services, and (3) the use by others of the enterprise resources yielding interest, royalties and dividends. The revenue should be recognized, provided that at the time of performance, it is not unreasonable to expect ultimate collection. If at the time of raising of any claim, it is unreasonable to expect ultimate collection, revenue recognition should be postponed.

Disclosure: In addition to the disclosures required by AS-1 on Disclosure of Accounting Policies, an enterprise should also disclose the circumstances in which revenue recognition has been postponed pending the resolution of significant uncertainties.

Recognition of revenue requires that revenue is measurable. An essential criterion for the recognition of revenue is that the consideration receivable for the sale of goods, the rendering of services or from the use by others of enterprise resources is reasonably determinable. When such consideration is not determinable within reasonable limits, the recognition of revenue is postponed.

Accounting Standard-10 deals with accounting for fixed assets. Its highlights are:

The gross book value of a fixed asset should be either historical cost or a revaluation computed in accordance with this standard.

The cost of a fixed asset should comprise its purchase price, and any attributable costs of bringing the assets to its working condition for its intended use. Financing costs relating deferred credits or to borrowed funds attributable to construction or acquisition of fixed assets for the period up to the completion of construction or acquisition of fixed assets should also be included in the gross book value of the asset to which they relate.

The cost of a self-constructed fixed asset should comprise those costs that relate directly to the specific asset and those that are attributable to the construction activity in general and can be allocated to the specific asset.

When a fixed asset is acquired in exchange or in part exchange for another asset, the cost of the asset acquired should be recorded either at fair market value or at the net book value of the asset given up, adjusted for any balancing payment or receipt of cash or other consideration.

Fixed assets acquired in exchange for shares or other securities in the enterprise should be recorded at their fair market value, or the fair market value of the securities issued, whichever is more clearly evident.

Subsequent expenditures related to an item of fixed asset should be added to its book value only if they increase future benefits from the existing asset beyond its previously assessed standard or performance.

Material items retired from active use and held for disposal should be stated at the lower of their net book value or net realizable value, and be shown separately in the financial statements.

Fixed assets should be eliminated from the financial statements on disposal or where no further benefit is expected from its use and disposal.

Losses arising from the retirement, or gains or losses arising from disposal of a fixed asset which is carried at cost should be recognized in the profit and loss statement.

When a fixed asset is revalued in financial statements, an entire class of assets should be revalued, or the selection of assets for revaluation should be made on a systematic basis. This basis should be disclosed. The revaluation in financial statements of a class of assets should not result in the net book value of that class being greater than the recoverable amount of assets of that class.

When a fixed asset is revalued upwards, any accumulated depreciation existing at the date of the revaluation should not be credited to the profit and loss account.

An increase in net book value arising on revaluation of fixed assets should be credited directly to owners' interests under the head of revaluation reserve. Under certain conditions only, it may be credited to the profit and loss account. A decrease in net book value arising on revaluation of fixed assets should be charged directly to the profit and loss account. It may be charged to the revaluation account under certain conditions only.

On disposal of a previously revalued item of fixed assets, the difference between net disposal proceeds and the net book value should be charged or credited to the profit and loss account except under certain conditions.

Goodwill should be recorded in the books only when some consideration in money or money's worth has been paid for it.

Disclosure: The following information should be disclosed in the financial statements:

1. gross and net book values of fixed assets at the beginning and at the end of an accounting period showing additions, disposals, acquisitions and other movements;
2. expenditure incurred on account of fixed assets in the course of construction or acquisition; and
3. revalued amount substituted for historical costs of fixed assets, the methods adopted to compute the revalued amounts, the nature of indices used, the year of any appraisal made, whether an external valuer was involved, in case where fixed assets are stated at revalued amounts.

Accounting Standard 11 (Revised) – Accounting for the Effect of Change on foreign Exchange Rates: This standard should be applied by an enterprise:

- (a) In accounting for transactions in foreign currencies; and
- (b) In translating the financial statements of foreign branches for inclusion in the financial statements of the enterprise.

The standard came into effect in respect of accounting periods commencing on or after April 1, 1995.

Definitions: The following terms are used in this standard with the meanings specified:

Reporting currency: It is the currency used in presenting the financial statements

Foreign currency: It is a currency other than the reporting currency of the enterprise.

Exchange rate: It is ratio for exchange of two currencies as applicable to the realization of a specific asset or the payment of a specific liability or the recording of a specific transaction or a group of inter-related transactions.

Average rate: It is mean of the exchange rates in force during a period.

Forward rate: It is exchange rate established by the terms of an agreement for exchange of two currencies at a specified future date.

Closing rate: It is the exchange rate at the balance sheet date.

Monetary items: These are money held, and assets and liabilities to be received or paid in fixed or determinable amounts of money, for instance, cash, receivables, payables.

Non-monetary items: These are assets and liabilities other than monetary items, for example, fixed assets, inventories, investments in equity shares.

Settlement date: It is the date at which a receivable is due to be collected or a payable due to be paid.

Recoverable amount: It is the amount which an enterprise expects to recover from the future use of an asset, including its residual value on disposal.

Recording Transaction on Initial Recognition: A transaction in a foreign currency should be recorded in the reporting currency by applying to the foreign currency amount the exchange rate between the reporting currency and the foreign currency at the date of the transaction.

Reporting Effects of Changes in Exchange Rates Subsequent to Initial Recognition: At each balance sheet date: (a) Monetary items denominated in a foreign currency (e.g. foreign currency notes, balances in bank accounts denominated in foreign currency) should be reported using the closing rate. However, in certain circumstances, the closing rate may not reflect with reasonable accuracy the amount in reporting currency that is likely to be realized from, or required to disburse, a foreign currency monetary item at the balance sheet date, for example, where there are transactions on remittances or where the closing rate is unrealistic or it is not possible to effect an exchange of currencies at the rate at the balance sheet date, for example, where there are transactions on remittances or where the closing rate is unrealistic or it is not possible to effect an exchange of currencies at that rate at the balance sheet date. In such circumstances, the relevant monetary item should be reported in the reporting currency at the amount which is likely to be realized from, or required to disburse, such item at the balance sheet date.

- (b) Non-monetary items other than fixed assets, which are carried in terms of historical cost denominated in a foreign currency should be reported using the exchange rate at the date of the transaction.
- (c) Non-monetary items other than fixed assets, which are carried in terms of fair value or other similar valuation, for instance, net realisable value, denominated in a foreign currency should be reported using the exchange rates that existed when the values were determined (e.g. if the fair value is determined as on the balance sheet date, the exchange rate on the balance sheet date may be used.)
- (d) The carrying amount of fixed assets should be adjusted as stated in the paragraphs below.

Recognition of Exchange Differences: Exchange differences arising on foreign currency transactions should be recognised as income or as expense in the period in which they arise, except as stated in paragraphs below.

Exchange differences arising on repayment of liabilities incurred for the purpose of acquiring fixed assets, which are carried in terms of historical cost, should be adjusted in the carrying amount of the respective fixed assets. The carrying amount of such fixed assets should, to the extent not already so adjusted or otherwise accounted for, also be adjusted to account for any increase or decrease in the liability of the enterprises, as expressed in the reporting currency by applying the closing rate. This is done for making payments towards the whole or a part of the cost of the assets or for repayment of the whole or a part of the monies borrowed by an enterprise from any person, directly or indirectly, in foreign currency specifically for the purpose of acquiring those assets.

The carrying amount of fixed assets which are carried in terms of revalued amounts should also be adjusted in the manner described in the preceding paragraph. However, such adjustment should not result in the net book value of a class of revalued fixed assets exceeding the recoverable amount of assets of that class, the remaining amount of increase in liability, if any, being debited to the revaluation reserve, or to the profit and loss statement in the event of inadequacy or absence of revaluation reserve.

Forward Exchange Contracts: An enterprise may enter into a forward exchange contract, or another financial instrument that is in substance a forward exchange contract, to establish the amount of the reporting currency required or available at the settlement date of a transaction. The difference between the forward rate and exchange rate at date of the transaction should be recognised as income or expense over the life of the contract, except in respect of liabilities incurred for acquiring fixed assets in which cash, such difference should be adjusted in the carrying amount of the respective fixed assets.

Any profit or loss arising on cancellation or renewal of a forward exchange contract should be recognised as income or as expense for the period, except in case of forward exchange contract relating to liabilities incurred to acquiring fixed assets, in which case, such profit or loss should be adjusted in the carrying amount of the respected fixed assets.

Depreciation: Where the carrying amount of a depreciable asset has undergone a change in accordance with the preceding paragraphs, the depreciation on the revised unamortized depreciable amount should be provided in accordance with Accounting Standard 6, depreciation accounting.

Translation of the Financial Statements of Foreign Branches: The financial statements of a foreign branch should be translated using the procedures given in paragraphs below:

Revenue items, except opening and closing inventories and depreciation, should be translated into reporting currency of the reporting enterprise at average rate. In appropriate circumstances, weighted average rate may be applied, for

example, where the income or expenses are not earned or incurred evenly during the accounting period (such as in the case of seasonal businesses), or where there are exceptionally wide fluctuations in exchange rates during the accounting period. Opening and closing inventories should be translated at the rates prevalent at the commencement and close respectively of the accounting period. Depreciation should be translated at the rates used for the translation of the values of the assets on which depreciation is calculated.

Monetary items should be translated using the closing rate. However, in circumstances where the closing rate does not reflect with reasonable accuracy the amount in reporting currency that is likely to be realized from, or required to disburse the foreign currency item at the balance sheet date, a rate that reflects approximately the likely realization or disbursement as aforesaid should be used.

Non-monetary items other than inventories and fixed assets should be translated using the exchange rate at the date of the transaction.

Fixed assets should be translated using the exchange rate at the date of the transaction. Where there has been an increase or decrease in the liability of the enterprise (as expressed in Indian rupees by applying the closing rate) for making payment towards the whole or a part of the cost of a fixed asset, or for repayment of the whole or a part monies borrowed by the enterprise from any person (directly or indirectly) in foreign currency specifically for the purpose of acquiring a fixed asset, the amount by which the liability is so increased or reduced during the year, should be added to, or reduced from, the historical cost of the fixed asset concerned.

Balance in 'head office account,' whether debit or credit, should be reported at the amount of the balance in the 'branch account' in the book of the head office after adjusting for unreasoned transaction.

The net exchange difference resulting from the translation of items in the financial statements of a foreign branch should be recognised as income or expense for the period, except to the extent adjusted in the carrying amount of the related fixed assets.

Contingent liabilities should be translated into the reporting currency of the enterprise at the closing rate. The translation of contingent liabilities does not result in any exchange difference as defined in this standard.

Disclosures: An enterprise should disclose:

- (a) The amount of exchange differences included in the net profit or loss for the period;
- (b) The amount of exchange differences adjusted in the carrying amount of fixed assets during the accounting period; and
- (c) The amount of exchange differences in respect of forward exchange contracts to be recognized in the profit or loss for one or more subsequent accounting periods.

Disclosure is also encouraged of an enterprise's foreign currency risk management policy.

Accounting Standard 12 deals with accounting for government grants. The ASB of the ICAI issued AS-12, 'Accounting for Government grants,' to be effective on recommendatory basis for two years in respect of accounting periods commencing on or after April 1, 1992. The Standard became mandatory in respect of accounts for periods commencing on or after April 1, 1994. Its highlights are:

Recognition: Government grants should not be recognized until there is reasonable assurance that (i) the enterprise will comply with the conditions attached to them, and (ii) the grants will be received

Accounting Treatment of Government Grants: Either of the two approaches may be followed for the accounting treatment of grants: the capital approach, under which a grant is treated as part of the shareholders' funds, and Income Approach, under which a grant is taken as income over one or more periods.

AS-12 states that, "Government grants related to specific fixed assets should be presented in the balance sheet by showing the grant as a deduction from the gross value of the assets concerned in arriving at their book value. Where the grant related to a specific fixed asset equals the whole, or virtually the whole, of the cost of asset, the asset should be shown in the balance sheet at a nominal value.

"Alternatively, the government grants related to depreciable fixed assets may be treated as deferred income which should be recognized in the profit and loss statement on a systematic and rational basis over the useful life of the asset, i.e., such grants should be allocated to income over the periods and in the proportions in which depreciation on those assets is charged. Grants related to non-depreciable assets should be credited to capital reserve under this method. However, if a grant related to a non-depreciable asset requires the fulfilment of certain obligations, the grant should be credited to income over the same period over which the cost of meeting such obligation is charged to

income. The deferred income should be separately shown in the financial statements.

“Government grants related to revenue should be recognized on a systematic basis in the profit and loss statement over the periods necessary to match them with the related costs which they are intended to compensate. Such grants should either be shown separately under ‘other income’ or deducted in reporting the related expense.

“Government grants of the nature of promoters’ contribution should be credited to the capital reserve and treated as a part of the shareholders’ funds.

“Government grants in the form of non-monetary assets, given at a concessional rate, should be accounted for on the basis of their acquisition cost. In case a non-monetary asset is given free of cost, it should be recorded at nominal value.

“Government grants that are receivable as compensation for expense or losses incurred in the previous accounting period or for the purpose of giving immediate financial support to the enterprise with no further related costs, should be recognized and disclosed, in the profit and loss statement of the period in which they are receivable, as an extraordinary item if appropriate.” (See AS-5).

Disclosure: The following should be disclosed:

- (i) the accounting policy adopted for government grants, including the methods of presentation in the financial statements;
- (ii) the nature and extent of government grants recognized in the financial statements, including grants of non-monetary assets given at concessional rate or free of cost.

Accounting Standard-13: This deals with accounting for investments. This standard came into effect for financial statements covering periods commencing on or April 1, 1995. The standard lays down that current investments and long-term investments should be disclosed distinctly in the financial statements.

Further classification should be specified as (a) government or trust securities, (b) shares, debentures or bonds, (c) investment properties, (d) other – specifying nature.

Cost of Investments: Cost of investments should include acquisition charges e.g., brokerage, fees, duties.

- If an investment is acquired, or partly acquired by issue or other securities, the acquisition cost shall be the fair value of the securities issued.
- If an investment is acquired in exchange for another asset, the acquisition cost will be the fair value of the asset given up.
- Alternatively, the acquisition cost will be the fair value of the investment acquired, if it is more clearly evident.

Fair Value: The amount for which an asset could be exchanged between a knowledgeable willing buyer and a knowledgeable willing seller in an arm’s length transaction. (Under appropriate circumstances, the market value or net realizable value provides an evidence of fair value.)

Market Value: The amount obtainable from the sale of an investment in an open market, net of expenses, necessarily to be incurred on or before disposal.

Carrying Amount of Investment in Financial Statements: Current investments should be carried at lower of cost and fair value determined either on an individual investment basis or by category of investments, but not on an overall (or global) basis.

Long term investments should be carried in the financial statements at cost. If there is a decline, other than temporary, in the value of an investment, such reduction should be determined and made for each investment individually. Any reduction in the carrying amount or any reversals of such reductions should be charged/credited to Profit and Loss Statement. On disposal of an investment, the difference between the carrying amount and net disposal proceeds should be charged/credited to Profit and Loss Statement.

Disclosure: The following information should be disclosed in the financial statements:

1. The accounting policies for determination of carrying amount of investments.
2. Classification of investments.
3.
 - (i) Amount included in the Profit and Loss Statement for interest, dividends, rentals on investments.
 - (ii) Profits and losses in disposal of current and long-term investments and changes in carrying amounts of such investments (to be shown separately).
 - (iii) Significant restrictions on the right of ownership, reliability of investments, or the remittance of income

and proceeds of disposal.

4. The aggregate amount of quoted and unquoted investments giving aggregate market value of quoted investment
5. Other disclosures as specifically required by the relevant statute governing the enterprise.

Accounting Standard- 14 Accounting for Amalgamations: This standard came into effect in respect of accounting periods commencing on or after April 1, 1995. This statement deals with accounting for amalgamations and the treatment of any resultant goodwill or reserves. There are two main methods of accounting for amalgamations: (a) the pooling of interest method, and (b) the purchase method.

An amalgamation may be either: (a) an amalgamation in the nature of merger, or (b) an amalgamation in the nature of purchase.

An amalgamation should be an amalgamation in the nature of merger when all the following conditions are satisfied:

- (i) All the assets and liabilities of the transferor company become, after amalgamation, the assets and liabilities of the transferee company.
- (ii) Shareholders holding not less 90% of the face value of the equity shares of the transferor company (other than the equity shares already held therein, immediately before the amalgamation, by the transferee company or its subsidiaries or its nominees) become equity shareholders of the transferee company by virtue of the amalgamation.
- (iii) The consideration for the amalgamation receivable by those equity shareholders of the transferor company who agree to become equity shareholders of the transferee company is discharged by the transferee company wholly by the issue of equity shares in the transferee company, except that cash may be paid in respect of any fractional shares.
- (iv) The business of the transferor company is intended to be carried on, after the amalgamation, by the transferee company.
- (v) No adjustment is intended to be made to the book values of the assets and liabilities of the transferor company when they are incorporated in the financial statements of the transferee company, except to ensure uniformity of accounting policies.

An amalgamation should be considered to be an amalgamation in the nature of purchase, when any one or more of the conditions specified above is not satisfied.

When an amalgamation is considered to be an amalgamation in the nature of merger, it should be accounted for under the pooling of interests method.

When an amalgamation is considered to be an amalgamation in the nature of purchase, it should be accounted for under the purchase method.

The goodwill arising on amalgamation should be amortized to income on a systematic basis over its useful life. The amortization period should not exceed five years unless a somewhat longer period can be justified.

The consideration for the amalgamation should include any non-cash element at fair value. In case of issue of securities, the value fixed by the statutory authorities may be taken to be the fair value. In case of other assets, the fair value may be determined by reference to the market value of the assets given up. Where the market value of the assets cannot be reliably assessed, such assets may be valued at their respective net book values.

Where the scheme of amalgamation sanctioned under a statute prescribes the treatment to be given to reserves of the transferor company after amalgamation, the same should be followed.

Disclosure: For all amalgamations, the following disclosures should be made in the first financial statements following amalgamations:

- (a) Names and general nature of business of the amalgamating companies;
- (b) Effective date of amalgamation for accounting purposes;
- (c) The method of accounting used to reflect the amalgamation; and
- (d) Particulars of the scheme sanctioned under a statute.

For amalgamation accounted for under the pooling of interests method, the following additional disclosures should be made in the first financial statements following the amalgamation:

- (a) Description and number of shares issued, together with the percentage of each company's equity shares

exchanged to effect the amalgamation; and

(b) The amount of any difference between the value of net identifiable assets acquired, and the treatment thereof. For amalgamations accounted for under the purchase method, the following additional disclosures should be made in the first financial statements following amalgamation:

- (a) Consideration for the amalgamation and a description of the consideration paid or contingently payable; and
- (b) The amount of any difference between the consideration and the value of net identifiable assets acquired, and the treatment thereof including the period of amortization of any goodwill arising on amalgamation.

Where an amalgamation is effected after the balance sheet date but before the issuance of the financial statements of either party to the amalgamation, disclosure should be made in accordance with AS-4, 'Contingencies and Events Occurring after the Balance Sheet Date,' but the amalgamation should not be incorporated in the financial statements.

Accounting Standard- 15- Accounting for Retirement Benefits in the Financial Statements of Employers:

This standard came into effect in respect of accounting periods commencing on or after April 1, 1995. The Standard deals with accounting for retirement benefits in the financial statements of employers. It applies to retirements benefits in the form of provident fund, superannuating /pension and gratuity provided by an employer to employees, whether in pursuance of requirements of any law or otherwise. It also applies to retirement benefits in the form of leave encashment benefit, health and welfare schemes and other retirement benefits, if the prominent characteristics of these benefits are the same as those of provident fund, superannuating/pension or gratuity benefit, that is, if such a retirement benefit is in the nature of either a defined contribution scheme or a defined benefit scheme as described in this standard.

In respect of retirement benefits in the form of provident fund and other defined contribution schemes, the contribution payable by the employer for a year should be charged to Profit and Loss Statement for the year. Thus, besides the amount of contribution paid, a shortfall of the amount of contribution paid comparable to the amount payable for the year should also be charged to the statement of profit and Loss for the year. On the other hand, if contribution paid is in excess of the amount payable for the year, the excess should be treated as prepayment.

In respect of gratuity benefit and other defined benefit schemes, the accounting treatment will depend upon the type of arrangement which the employer has chosen to make.

- (i) If the employer has chosen to make payment for retirement benefits out of his own funds, an appropriate charge to the statement of profit and loss for the year should be made through a provision for the accruing liability should be calculated according to actuation.
- (ii) In case the liability for retirement benefits is funded through creation of a trust, the cost incurred for the year should be determined actuarially. Such actuarial valuation should normally be conducted at least once in every three years. However, where the actuarial valuations are not conducted annually, the actuary's report should specify the contribution to be made by the employer on annual basis during the inter-valuation period. This annual contribution (which is in addition to the contribution that may be required to finance unfounded fast service past) reflect proper accrual of retirement benefit cost for each of the years during the inter-valuation period, and should be charged to the statement of profit and loss every year.
- (iii) In case the liability for retirement benefits is founded through a scheme administered by an insurer, an actuarial certificate or confirmation from the insurer should be obtained that the contribution payable to the insurer is the appropriate accrual of the liability for the year. Where the contribution paid during a year is lower than the amount required to be contributed during the year to meet the accrued liability as certificate by the actuary or confirmed by the insurer, as the case may be, the shortfall should be charged to the statement of profit and loss for the year. Where the contribution paid during a year is in excess of the amount required to be contribution during the year to meet the accrued liability as certified by the actuary or confirmed by the insurer, as the case may be the excess should be treated as a prepayment.

Any alteration in the retirement benefit costs arising from (a) introduction of a retirement benefit scheme for the existing employees or making of improvements to an existing scheme, (b) changes in the actuarial method used or assumptions adopted, should be charges or credited to the statement of profit and loss as they arise in accordance with AS-5, Prior period and Extraordinary items and Changes in Accounting Policy. Additionally, a change in the actuarial method used should be treated as a change in an accounting policy and disclosed in accordance with AS-5.

When a retirement benefit scheme is amended with the result that additional benefits are provided to retired employees, the cost of the additional benefits should be accounted for as stated above.

Disclosures: The financial statements should disclose the method by which retirement benefit costs for the period have been determined. In case the costs related to gratuity and other defined benefit schemes are based on an actuarial valuation, the financial statements should also disclose whether the actuarial valuation was made at the end of the period or at an earlier date. In the latter case, the date of the actuarial valuation should be specified and the method by which the accrual for the period has been determined should also be briefly described, if the same is not based on the report of the actuary.

Accounting Standard-16 – Accounting for Borrowing Costs: This standard came into effect in respect of accounting period commencing on or after 1-4-2000 and is mandatory in nature. This standard should be applied in accounting for borrowing costs. The following terms are used in this standard with the meaning specified:

Borrowing costs: These are interest and other costs incurred by an enterprise in connection with the borrowing of funds.

Qualifying asset: It is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale.

Recognition: Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset should be capitalized as part of the cost of that asset. Other borrowing costs should be recognised as an expense in the period in which they are incurred. The amount of borrowing costs eligible for capitalization should be determined in accordance with this standard.

Borrowing costs eligible for capitalization: To the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset, the amount of borrowing costs eligible for capitalization on that asset should be determined as the actual borrowing costs incurred on that borrowing during the period less any income on the temporary investment of those borrowings.

To the extent the funds are borrowed generally and used for the purpose of obtaining a qualifying asset, the amount of borrowing costs eligible for capitalization should be determined by applying a capitalization rate to the expenditures on that asset. The capitalization rate should be the weighted average of the borrowing costs applicable to the borrowing of the enterprise that are outstanding during the period, other than borrowing made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs capitalized during a period should not exceed the amount of borrowing costs incurred during the period.

Commencement capitalization: The capitalization of borrowing costs as a part of the cost of a qualifying asset should commence when all the following conditions are satisfied:

- (a) expenditure for the acquisition, construction or production of a qualifying asset is being incurred.
- (b) borrowing costs are being incurred; and
- (c) activities that are necessary to prepare the asset for its intended use are in progress.

Suspension of capitalization: Capitalization of borrowing costs should be suspended during extended periods in which active development is interrupted.

Cessation of capitalization: Capitalization of borrowing costs should cease when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

When the construction of a qualifying asset is completed in parts and a completed part is capable of being used while construction continues on other parts, capitalization of borrowing costs in relation to a part should cease when substantially all the activities necessary to prepare that part for its intended use or sale are completed.

Disclosure: The financial statements should disclose:

- (a) the accounting policy adopted for borrowing costs, and
- (b) the amount of borrowing costs capitalized during the period.

The following proposed accounting standards are at various stages of formulation:

1. Consolidation of Financial Statements
2. Earnings per Share
3. Plantation Industries
4. Intangible Assets
5. Related Party Disclosures
6. Segment Reporting (See details in Chapter 11)

7. Accounting for Investments in Associates
8. Discontinuing Operations
9. Leasing (ED of the proposed AS on 'Leases' has been issued by the ASB)

SEGMENT REPORTING (AS-17)

Meaning & Objective

17.1 An enterprise deals in multiple products/services and operates in different geographical areas. Multiple products/services and its operations in different geographical areas are exposed to **different risk and return**. Information about multiple products/service and its operation in different geographical is used to assess the risk and return of multiple products/service and its operation in different geographical area. Disclosure of such information is called segment reporting.

- **Segment reporting helps users of financial statements.**
 - To better understand the performance of the enterprise.
 - To better assess the risks and returns of the enterprise
 - To make more informed judgments about the enterprises as whole.

Segment

17.2 There are two type of segment

- 17.2-1 Business segment – Segment is made on the basis of products/services which are exposed to different risks and return.
- 17.2-2 Geographical segment – Segment is made on the basis of its operation in different geographical areas which are exposed to different **risks and returns**.

In process of identifying the predominant source of risk and returns of the company, internal organisation and management structure of company and system of internal reporting to Board of Directors and chief executive officer provide the best evidence of the predominant source of risks and returns of the company.

So, the reportable segment may be either a Business segment or Geographical segment.

Identification of Reportable Segments (Sub Segments)

17.3 Reportable segment is a business segment or a geographical segment identified on the basis of their definitions for which segment information is required to be disclosed by the statement.

Business segment or geographical segment which has been identified as reportable shall be further divided to include sub segments based on the following conditions:

- Segment Revenue from sales to external customers and internal transfer is 10% or more than total external and internal revenue of all segments.

Or

- 10% or more of segment result
(Segment results means: if some segments are in loss then total of loss of all loss-making segments or if some segments are in profit, total profit of all profit-making segments. Whichever is higher i.e. total profit or total loss figure in absolute term.)

Or

- Segment asset is 10% or more than total assets of all segments
- Further, Management may at its discretion choose any segment as reportable segment even if such segment does not fulfil the criteria stated above.
- Ensure whether at least 75% of total external revenue should be in the reportable segments.
- If 75% of total external revenue is not in the reportable segments, then additional reportable segment should be identified ignoring 10% threshold limits until at least 75% of total external revenue is included in reportable segments.

Reportable segments

17.4 **Reportable segments** are classified in following two parts for the purpose of disclosure:

- Primary Reportable Segment.
- Secondary Reportable Segment.

17.4-1 Basis of Classification – Following are the methods or conditions to identify the primary reportable segment or secondary reportable segments.

Basis of classification

S. No.	Conditions	Primary Reportable Segment	Secondary Reportable Segment (Refer Annexure III)
1.	If risks and returns of a company is mainly affected by difference in product/service.	Business Segment	Geographic Segment based on location of customers
2.	If risks and returns of a company is mainly affected by its operations in different geographical area.		
	(a) Based on location of assets and location of customers	Geographical Segment (based on location of assets)	Business Segment Business Segment
	(b) Based on location company is mainly affected by of assets only and if location of its customers is different from the location of its assets.	Geographical Segment (based on location of customers)	+ Customer based geographic segment sales Business
	(c) Based on location of customers and if the assets of the enterprise are located in different geographical area from its customers.	Geographical Segment (based on location of customers)	Business Segment + Assets based geographic segment assets
3.	If risks returns of a company is mainly affected both by difference in product/service and its operations in different geographical area.	Business Segment	Geographic Segment

Disclosure

17.5 The disclosure requirements of primary segments are as under:-

- Revenue from external customers.
- Revenue from transactions with other segments
- Segment result
- Cost to acquire tangible and intangible fixed assets.
- Depreciation and amortization expenses.
- Carrying amount of segment assets.
- Segment liabilities.
- Non-cash expenses other than depreciation and amortization.
- Reconciliation of revenue, result, assets and liabilities.

RELATED PARTY DISCLOSURE (AS-18)

Need and objectives

18.1 Sometimes business transactions between related parties lose the feature and character of the arms length

transactions. Related party relationship affects the volume and decision of business of one enterprise for the benefit of the other enterprise. Hence disclosure of related transaction is essential for proper understanding of financial performance and financial position of enterprise.

Related party

18.2 A related party is essentially any party that controls or can significantly influence the management or operating policies of the company; the relationship is said to generally exist between

- Parent and subsidiary company
- Joint venture partner
- Investor and its investee
- Associates
- Key management personnel of reporting enterprises
- Relative in case of individual enterprises
- Significant influence over reporting enterprises policy

Exceptions of Related Party

18.5 Following relationship will not be deemed as related party.

- Two companies have a director in common but director is not able to influence the mutual dealing between the companies.
- A single customer or supplier or franchiser or distributor or general agent with whom enterprise's transactions is in significant volume.
- Providers of finance
- Trade union
- Government departments and agencies
- State controlled enterprises as regards related party relationship with other State Controlled enterprises.

Related party transactions

18.6 It means a transfer of resource or obligations between related parties regardless of whether or not a price is charged.

Example of related party transaction are as under:

- Purchase or sales of goods (finished or unfinished)
- Purchase or sales of fixed assets
- Rendering or receiving of services
- Leasing or hire purchase arrangements
- Transfer of research and development
- Licence agreements
- Finance (including loan and equity contributions)
- Guarantees and collaterals
- Management contracts including for deputation of employees

Disclosure

18.7 For the purpose of disclosure related parties relationship can be categorized as under:

When the existence of relationship is due to the concept of the control – even when there are no transactions between the related parties, still the following disclosure is needed.

- Name of the related party should be disclosed and
- Nature of the related party relationship should be disclosed.

When the existence of relationship is due to significant influence, then no disclosure is required if there are no transactions during the year between related parties.

There are related party transactions—following details should be disclosed in both the cases whether relationship is of control or of influence.

- Name of the related party
- Description of relationship
- Description of the nature of transaction
- Volume of the transactions either as an amount or as an appropriate proportion
- Any other element of the transactions, which is essential for understanding the financial statements
- Amount or appropriate proportion of outstanding items and provision for doubtful debts
- Amount written off or written back in the period in respect of debts due from to related party.

This disclosure is not applicable in a case where providing such disclosures would conflict with the report's duties of confidentiality as specifically required.

Disclosure is must of the related parties even if the transactions are arms length transactions or transactions are not influenced by the relationship.

ACCOUNTING FOR LEASE (AS-19)

Needs and Objective

19.1 Lease is an arrangement by which the lessor gives the right to use an asset for given period of time to the lessee on rent.

It involves two parties, a lessor and a lessee and an asset which is to be leased. The lessor who owns the asset, agrees to allow to the lessee to use it for a specified period of time in return for periodic rent payments.

The lease transactions derive its accounting complexity from number of alternatives available to the parties involved. Lease can e structured to take tax benefit. They can be used to transfer ownership of the leased asset, and they can be used to transfer the risk of ownership.

In any event substance of transactions dictates the accounting treatment, the lease transaction (finance lease) is probably the best example of the accounting profession's substance over legal form.

If the transactions effectively transfer ownership to lessee, then the substance of the transactions is that of a sale and should be recognized as such even though transactions take form of a lease.

Types of lease

19.2 For the purpose of accounting we classify the lease into two categories as follows:-

(a) Finance lease (b) Operating lease.

19.2.1 It is a lease, which transfers substantially all the risks and rewards incidental to ownership of an asset to the lessee by the lessor but not the legal ownership. In following situations, the lease transactions are called Finance Lease.

- The lessee will get the ownership of leased asset at the end of the lease term.
- The lessee has an option to buy the leased asset at the end of term at price, which is lower than its expected fair value at the date on which option will be exercised.
- The lease term covers the major part of the life of asset.
- At the beginning of lease term, present value of minimum lease rental covers the initial fair value.
- The asset given on lease to lessee is of specialized nature and can only be used byt helessee without major modification.

Operating Lease

19.2.2 It is a lease which does not transfer substantially all the risk and reward incidental to ownership.

Classification of lease is made at the inception of the lease; if at any time the lessee and lessor agree to change the provision of lease and it results in different category of lease, it will be treated as separate agreement.

Applicability

19.3 The Accounting Standard is not applicable to following type of lease:

- Lease agreement to explore natural resources such as oil, gas, timber, metal and other minerals rights
- Licensing agreements for motion picture film, video recording, plays, manuscripts, patents and other rights.
- Lease agreement to use land.

Disclosure

19.11 The following disclosure in financial statements of the lessee and lessor should be made as regards lease.

19.11.1 Disclosure in operating lease by lessor-

- General description of significant leasing arrangements
- Accounting policy for initial direct payment
- Future lease payments in aggregate classified as:
 - not later than one year;
 - later than one year and not later than five years;
 - later than five years;

19.11.2 Disclosure in operating lease by the lessee-

- General description of the significant leasing arrangements
- Total of future minimum lease payments in following period
 - not later than one year;
 - later than one year and not later than five years;
 - later than five years;
- Lease payments recognized in profit/loss A/c for the period.

19.11.3 Disclosure in finance lease by the lessor -

- General description of the significant lease payment
- Accounting policy for initial direct cost
- Reconciliation of total gross investment in lease and present value of MLP receivable at balance sheet date
- Minimum lease payment (MLP) receivable in following categories
 - not later than one year;
 - later than one year and not later than five years;
 - later than five years;

Disclosure in Finance Lease by the Lessee -

- Asset under finance lease segregated from an asset
- Reconciliation of total MLP with its present value on balance sheet date
- MLP receivable in following categories on balance sheet date
 - not later than one year;
 - later than one year and not later than five years;
 - later than five years;

EARNINGS PER SHARE (AS-20)**Objective**

20.1 Earning Per Share (EPS) is a financial ratio that gives the information regarding earning available to each equity share. It is very important financial ratio for assessing the state of market price of share. This accounting standard gives computational methodology for the determination and presentation of earning per share, which will improve the comparison of EPS. The statement is applicable to the enterprise whose equity shares or potential equity shares are listed in stock exchange.

Types of EPS

20.2 There are two type of earning per share (EPS), which is to be reported by the enterprises on the face of the statement of profit and loss account

- Basic EPS
- Diluted EPS

20.2-1 Basic EPS: Basic EPDS is calculated as under:

$$\text{Basic Earnings Per Share} = \frac{\text{Net profit/loss for the period attributable to equity shareholder}}{\text{Weighted average number of equity Shares outstanding during the period.}}$$

Diluted Earning Per Share

20.4 Diluted earning per share is calculated when there are potential equity shares in capital structure of the enterprises. A potential equity shares are those financial instrument which entitle the holder to the right of equity shares like convertible debentures, convertible preference shares, options warrants etc.

- **Diluted earning per shares**

Net profit attributable to equity share holders (after adjustment for diluted earnings)

$$= \frac{\text{Average number of weighted equity shares outstanding during the period (assuming the conversion of diluted potential equity shares)}}{\text{Average number of weighted equity shares outstanding during the period (assuming the conversion of diluted potential equity shares)}}$$

Disclosure

- Disclosure of numerator and reconciliation. The amount used as numerator for calculating basic and diluted equity and its reconciliation with net profit or loss for the period.
- Disclosure of denominator and reconciliation. Weighted average number of shares used as denominator for calculating basis and diluted EPS and reconciliation of their denominators to each other.

CONSOLIDATED FINANCIAL STATEMENTS (AS-21)**Objective**

21.1 The objective of this statement is to present financial statements of a parent and its subsidiary(ies) as a single economic entity. In other words the holding company and its subsidiary(ies) are treated as one entity for the preparation of these consolidated financial statements. Consolidated profit/loss account and consolidated balance sheet are prepared for disclosing the total profit/loss of the group and total assets and liabilities of the group. As per this accounting standard, the consolidated balance sheet if prepared should be prepared in the manner prescribed by this statement.

Scope of consolidated financial statement

21.8 A parent, which is required to prepare the consolidated financial statements, should consolidate the financial statements of all its subsidiary(ies), whether domestic or foreign.

Exceptions

21.9 Consolidated financial statements are not required to be prepared even if parent-subsidiary(ies) relationship exists when:—

- A parent acquires the control (investment in subsidiary), which is intended to be temporary as the investment (control) is to be disposed in the near future.
 - The subsidiary operates under severe long-term restrictions and due to this its ability to transfer the funds to parent is significantly weakened.
- Dissimilar activities of parent and its subsidiaries cannot be the ground for non-consolidation of financial statements.

Disclosure

21.15 Following disclosure should be made in consolidated financial statements.

- List of all subsidiaries
- Proportion of ownership interest
- Nature of relationship between parent and subsidiary whether direct control or control through subsidiaries
- Name of the subsidiary which reporting date are different
- The fact for different accounting policies applied for preparation of consolidated financial statements.
- If consolidation of particular subsidiary has not been made as per the grounds allowed in accounting standards the reason for not consolidating should be disclosed.

ACCOUNTING FOR TAXES ON INCOME (AS-22)

Objective

22.1 This Accounting Standard prescribes the accounting treatment for taxes on income. Traditionally amount of tax payable is determined on the profit/loss computed as per income-tax laws. According to this accounting standard tax on income is determined on the principle of accrual concept. According to this concept, tax should be accounted in the period in which corresponding revenue and expenses are accounted in simple words tax shall be accounted on accrual basis; not on liability to pay basis.

22.2 Scope

- Taxes on income include all domestic and foreign taxes, which are based on taxable income.
- Taxes on income exclude tax payable on distribution of dividends and other distribution made by enterprise.

Disclosure

- The break-up of deferred tax asset/liability should be disclosed.
- In case of deferred tax asset arising out of unabsorbed depreciation or loss, evidence supporting recognition should be disclosed.
- Deferred tax asset/liability should be disclosed separately from current asset/liabilities. They should also be distinguished from advance tax/tax provision/tax refund due.
- Deferred tax asset and liability should set off if permissible under the tax laws but to be shown separately if not permissible.

ACCOUNTING FOR INVESTMENTS IN ASSOCIATES IN CONSOLIDATED FINANCIAL STATEMENTS (AS-23)

Objective

23.1 The accounting standard was formulated with the objective to set out the principles and procedures for recognizing the investment in associates in the consolidated financial statements of the investor, so that the effect of investment in associates on the financial position of the group is indicated.

Applicability

23.2 The accounting standard is applicable for investment in associates when the investor prepares consolidated financial statements. In other words, if the investor is not required to prepare consolidated financial statement, the accounting standard has no applicability.

The Accounting Standard (AS-23) is not applicable in following cases:-

- The investment is acquired and held exclusively with a view to its subsequent disposal in the near future.
- The associates operate under long-term restrictions that significantly impair its ability to transfer funds to the investor.
- When investor has no significant influence in an associate or ceases the significant influence.
- When consolidated financial statement of investor is not made.

Disclosures

Investor should disclosure in its consolidated financial statement the following:-

1. Description of associate including the proportion of ownership interest should be disclosed.
2. Investment in associates accounted for using the equity method should be classified as long-term investments.
3. Different in reporting dates of financial statements of associates and of the investor should be disclosed.

DISCONTINUING OPERATIONS (AS-24)

Need & Objective

24.1 The Accounting Standard "discontinuing operations" issued by the ICAI is recommendatory in nature at present. This standard covers "discontinuing operations" rather than "discontinued operations". The focus of the disclosure of the information is about the operations, which the enterprise plans to discontinue, rather than disclosing about the operations, which are already discontinued. However, the disclosure about discontinued operation is also covered by this standard.

Traditionally the profit and loss account provides the information about the overall profit of the enterprise; if segment information as per AS-17 is provided, a user can get the information about business segment and geographical segments. However, whether these segments will be continued in future or not is not provided by AS-17. If the enterprise has plan to discontinue the operation of particular segment, the user has to understand the information about the discontinuing operation distinctly from those of the continuing operation so that the user can make projections of an enterprise cash flows, earning generating capacity and financial position by segregating information about discontinuing operation from information about continuing operation.

24.4 Presentation & disclosure

- **Initial disclosure** – First disclosure after initial disclosure event occurs about the discontinuing operations.
 - Description of the discontinuing operation.
 - Business or geographical segments in which it is reported.
 - Date and nature of initial disclosure event.
 - Timing of expected completion of discontinuance.
 - Carrying amount of total assets and liabilities to be disposed of.
 - Amount of revenue and expense attributable to discontinuing operation.
 - Amount of pre-tax profit or loss and tax expense attributable to discontinuing operation.
 - Net cash flows attributable to the operating, investing and financing activities of the discontinuing operation.
- **Other disclosure** – When an enterprises disposes of assets or settles liabilities attributable to a discontinuing operation, the following other information are also disclosed.
 - Amount of gain or loss recognized on the disposal of assets or settlement of liabilities and related income tax.
 - Net selling prices from the sale of those net assets for which the enterprise had entered into binding sale agreements and the expected timing thereof and carrying amount of those assets.

INTERIM FINANCIAL REPORTING (IFR) (AS-25)

What is Interim Financial Reporting (IFR)

25.1 Interim financial reporting is the reporting for periods of less than a year. As per clause-41 of listing agreement, the companies are required to publish the financial results on a quarterly basis.

As per the Standard, Interim Financial Report means a financial report containing either a complete set of financial statement or set of condensed financial statement for an interim period. Interim period is a period of reporting shorter than full financial year.

What are financial statements

25.2 A complete set of financial statements normally includes

- Balance Sheet
- Statement of Profit and Loss Account
- Cash Flow Statement
- Notes to Accounts and Accounting Policies

Objectives

25.3 In general the basic objective of Interim Financial Reporting (IFR) is to provide frequent and timely assessment of enterprise performance. However interim reporting has inherent limitation, as the reporting period is shortened, the effect of errors in estimation and allocation are magnified. The proper allocation of operating expenses is a significant concern. Annual operating expenses may concentrate in the interim period, yet benefit the entire years operation, for example – advertisement expenses or major repair and maintenance of equipments, the effect of seasonal fluctuation and temporary market conditions further limit the reliability, comparability and predictive value of interim reports and because of this reporting environments the need of accounting standard on interim financial reporting was felt. The objective of this standard is to prescribe the minimum content of interim financial report (IFR) and to prescribe the principles for recognition and measurement in a complete or condensed financial statement for an interim period. However, it is necessary to disclose any events or transactions, which are material for understanding

the interim financial reporting.

25.8.1 Minimum disclosure of notes – Following minimum disclosure of notes and explanatory statements should be made-

- A statement that the same accounting policies are followed in the interim financial statements as these followed in the most recent annual financial statements or, if these policies have been changed, a description of the nature and effect of the change.
- Description about the seasonal or cyclical effect on interim financial year
- Unusual factors that affected assets, liabilities, equity, net income, and cash flow.
- Effect of change in estimates
- Change in debt and equity through issuance, repurchase and repayments
- Details of dividend payment
- Segment revenue, segment result for business segment or geographical segment, whichever is the primary basis of the reporting entity.
- Material event that occurred after the end of interim period
- Effect of changes in composition of the enterprise during interim period – change in composition include business combination, acquisition, restructuring, disposal of subsidiaries etc.
- Change in contingent liabilities since the last balance sheet date.

INTANGIBLE ASSETS (AS-26)

The intangible assets can be classified into three categories for accounting purpose.

- Unidentifiable
- Acquired identifiable
- Internally generated identifiable

26.2-1 Unidentifiable Intangible Assets- Unidentifiable Intangible Assets mean assets which cannot be identified separately from other assets like- internally generated goodwill or other assets typically included in goodwill since they cannot be separated from goodwill.

26.2-2 Acquired identifiable intangible assets – Acquired identifiable intangible assets such as patents, licenses and trademark purchased goodwill generally meet asset recognition criteria, since they are acquired.

And cost is paid for them presumable because they have future earning potential. When patents, licenses and trademarks are internally generated, it is generally possible to identify and capitalize directly related outlays, such as legal fee and registration cost. However, these expenditures are generally a very small fraction of the true worth of the assets.

26.2-3 Internally generated identifiable- intangible assets – Internally generated identifiable intangible assets such as brand which are controversial from an accounting standpoint – for example, valuable brands such as Coca Cola, Sony were created over years and it is difficult to arrive at the cost of generating these assets, internally it is possible that the worth of these brands may be worth billions of rupees and in some cases more than the tangible assets of these companies.

Considering the above problems and controversies in accounting regarding intangible assets, the Institute of Chartered Accountants of India has issued AS-26 on intangible assets. This standard prescribes the accounting treatment for intangible assets.

Objective of Accounting Standard

26.3 Following are the objectives of this standard:-

- Prescribing accounting treatment for intangible assets
- Prescribing criteria for recognition of assets in books of account
- How to measure the amount at which the intangible assets should be recorded in Books
- Amortization method for intangible assets
- Disclosure about intangible assets in financial statements of the enterprises

Disclosure

The financial statement should disclose the following in respect of intangible asset:-

- Useful life or amortization rate.
- Amortization method.
- Gross Carrying amount, accumulated amortization and impairment loss at the beginning and at the end of the method.
- Reconciliation of carrying amount at the beginning and at the end of the period.
- **Further Disclosure:**
 - If amortization period is more than ten years, the reason why the useful life is estimated for more than 10 years.
 - Carrying amount of intangibles whose life is restricted pledged on security.
 - Research and Development Expenses recognized as expenses during the period.

FINANCIAL REPORTING OF INTEREST IN JOINT VENTURE (AS-27)**What is Joint Venture?**

27.1 Joint venture is defined as a contractual arrangement whereby two or more parties carry an economic activity under joint control. Control is the power to govern the financial and operating policies of an economic activity so as to obtain benefit from it. Joint control is the contractually agreed sharing of control over economic activity.

It must be noted that AS-27 only mentions the "Control" not the 'Influence' as compared to investment in associated in consolidated financial statement AS-23 and related party disclosure AS-18. For the joint venture the joint control must be demonstrated, not the significant influence in economic entity.

As per the accounting standard the Joint Venturer may be of three forms:

- Jointly controlled operation
- Jointly controlled assets
- Jointly controlled entities

Disclosure

27.4 A venture should make the following disclosure in its separate as well as in consolidated financial statement:

- A list of all joint venturer description of interest in significant Joint Venture
- Proportion of interest in case of jointly controlled entity.
- The aggregate amounts of each of the assets, liabilities, income and expenses related to its interest in the jointly controlled entities.
- Amount of capital commitments in the joint venture that has been incurred with other venturer and its share in such capital commitments
- Any contingency that has been incurred in relation to its interest in joint venture.
- Its share of contingencies that has been incurred jointly as the other venturer
- Contingencies for which the venturer is liable for other venturer of joint venturer

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Chapter-19

LEASE ACCOUNTING

Leasing is widely used in Western countries to finance investments. In the U.S., which has the largest leasing industry in the world, lease financing contributes approximately one third of total business investments. Leasing all over the world is becoming an important source of financing assets. In the changing economic and financial environment of India it has assumed an important role.

GROWTH OF LEASING

In India, leasing particularly equipment leasing is a recent development. The distinction of introducing equipment leasing as a new instrument of financing goes to the First Leasing Company of India Limited (FLC) which commenced business in 1973. However, the business of FLC grew at a slow pace. Leasing business, on the whole, did not pick up momentum in the 1970s. It is significant that a second leasing company came up only in 1979. This was the Twentieth Century Leasing Company Limited.

The growth of Twentieth Century's leasing business has been phenomenal and its shareholders have benefited greatly. The success of Twentieth Century has attracted many others to the leasing industry. From just about three or four companies up until 1983, the number of leasing companies has grown to about 350-400 today.

A number of large-sized leasing companies have entered the leasing industry. A significant competitive pressure comes from the financially strong commercial banks who have recently started leasing through their subsidiary companies. Several financial institutions such as the Industrial Credit and Investment Corporation of India (ICICI), the Industrial Reconstruction Corporation of India (IRCI), the State Industrial and Investment Corporation of Maharashtra Limited (SICOM), the Gujarat Industrial and Investment Corporation (GIIC), and the Karnataka State Industrial Development Corporation (KSIDC) have also started financing leases. The International Finance Corporation (IFC) with the support of large companies in each of the four regions-western, eastern, southern and northern regions and in collaboration with Twentieth Century and Bank of India has entered the leasing industry in a big way. So have TVS group and the State Bank of India, National Insulated Cable and the United Commercial Bank, and Motor and General Finance Company and the Punjab National Bank.

The leasing industry is very competitive, especially for the smaller companies. Most of the leasing companies are small in size; their share capital is less than Rs 1 crore. It is doubtful that the small companies will be able to operate economically and benefit their users and shareholders. They will find the going difficult. The pressure of competition is already seen on lease rentals. Lease rentals have declined from Rs 30-35 per Rs 1,000 per month for a 5 year lease to Rs 22-25.

Despite rapid growth, leasing has so far contributed only a small proportion of business investment. Business is expected to grow fast and capture an estimated Rs 2,000 crore in the near future. The estimated investment in leased assets stood at Rs. 50 crore in 1983 and Rs 1,000 crore in 1991.

The growth in leasing has generated a number of myths and misconceptions. The academic world is not untouched either. More than a dozen approaches for evaluating a lease have been suggested,¹ with considerable disagreement on which one is the best.

In this chapter, we shall dispel some of the myths and misconceptions about leasing and discuss how a lease should be evaluated.

LEASE DEFINED

Lease is contract between a lessor, the owner of the asset, and a lessee, the user of the asset. Under the contract, the owner gives the right to use the asset to the user over an agreed period of time for a consideration called the *lease rental*. The lessee pays the rental to the lessor as regular fixed payments over a period of time at the beginning of at the end of a month, quarter, half-year, or year. Although generally fixed, the amount and timing of payment of lease rentals can be tailored to the lessee's profits or cash flows. In *up-fronted leases*, more rentals are charged in the initial years and less in the later years of the contract. The opposite happens in *back-ended leases*. At the end of the lease contract, the asset reverts to the lessor, who is the legal owner of the assets. As the legal owner, it is the lessor not lessee, who is entitled to claim depreciation (and investment allowance) on the leased asset. In long-term lease contracts, the lessee is generally given an option to buy or renew the lease. Sometimes, the lease contract is divided into two parts-primary lease and secondary lease for the purposes of

lease rentals. Primary lease provides for the recovery of the cost of the asset and profit through lease rentals during a period of about four or five years. It may be followed by a perpetual, *secondary lease* on nominal lease rentals. Various other combinations are possible.

Although the lessor is the legal owner of a leased asset, the lessee bears the risk and enjoys the returns. The lessee benefits if the leased assets operates profitably, and suffers if the asset fails to perform. Leasing separates ownership and use as two economic activities, and facilitates asset use without ownership.²

A lessee can be individual or a firm interested in the use of an asset without owning. Lessors may be equipment manufacturers or leasing companies who bring together the manufacturers and the users. In the U.S., equipment manufacturers are the largest group of lessors followed by banks. In India, independent leasing companies form the major group in the leasing industry. Since banks in India have been allowed to enter the leasing industry, they, together with financial institutions such as the Industrial Credit, and Investment Corporation of India, are likely to become the largest group in future.

Lease, Hire Purchase and Instalment Sale

In hire purchase, the ownership passes to the hirer once he has paid the capital and interest charges. A hire purchase agreement involves the following three conditions: (a) the owner gives the possession of his asset to the hirer with an understanding that hirer will pay agreed installments over a specified period, (b) the ownership of the asset will transfer to the hirer on paying all instalments, and (c) the hirer will have the option to terminate the agreement any time before the transfer of ownership of the asset. Thus, for the hirer, the hire purchase agreement is like a cancelable lease with a right to buy the asset. The hire "purchaser" is required to show the hired asset on his balance sheet and is entitled to claim depreciation, although he may not own the asset. Only the interest part of the hire charge is tax deductible.

In contrast, the entire lease rental is treated as deductible expense. The lessee in India cannot claim depreciation and is not obliged to show the leased asset on his balance sheet.

Instalment sale is a credit sale and the legal ownership passes to the buyer immediately as soon as the first instalment is paid. The balance is treated as a secured loan on which interest is payable. Interest is tax deductible. The asset is shown by the buyer on his balance sheet.

TYPES OF LEASES

Two types of leases can be distinguished : (a) operating lease and (b) financial lease.

Operating Lease

Short-term, cancellable lease agreements are called operating leases. Convenience and instant services are the hallmarks of operating leases. Examples are: a tourist renting a car, lease contracts for computers, office equipment, car, trucks, and hotel rooms. For assets such as computers or office equipment, an operating lease may run for 3 to 5 years. The lessor is generally responsible for maintenance and insurance. He may also provide other services. A single operation lease contract may not fully amortize the original cost of the asset; it covers a period considerably shorter than the useful life of the asset. Because of the short duration and the lease's option to cancel the lease, the risk of obsolescence remains with the lessor. Naturally, the shorter the lease period and/or higher the risk of obsolescence, the higher will be the lease rentals.

Financial Lease

Long-term, non-cancellable lease contracts are known as financial leases. Examples are plant, machinery, land, building, ships, and aircrafts. In India, financial leases are very popular with high-cost and high-technology equipment. Financial leases amortize the cost of the asset over the term of lease; they are, therefore, also called capital, or full-payout leases. Most financial leases are direct leases. The lessor buys the asset identified by the lessee from the manufacturer and signs a contract to lease it out to the lessee. Sometimes, a user may sell an (existing) asset owned by him to the lessor (leasing company) and lease it back from him. Such *sale and lease back arrangements* may provide substantial tax benefits. For example, in April 1989 Shipping Credit and Investment Corporation of India (SCICI) purchased Great Eastern Shipping Company's bulk carrier, Jag Lata, for Rs 12.5 crore and then leased it back to Great Eastern on a five-year lease, the rentals being Rs 28.13 lakh per month. The ship's written-down value was Rs 2.5 crore.

In financial lease, the maintenance and insurance are normally the responsibility of the lessee. The lessee also bears the risk of obsolescence. A financial lease agreement may provide for renewal of contract or purchase of the asset by the lessee after the contract expires. The option of purchasing the leased asset by the lessee is not incorporated

in the lease contract in India, because if such an option is provided the lease is legally construed to be a hire purchase agreement.

There are a large number of lease terminologies used in practice. Exhibit I explains some of the commonly used lease terms.

EXHIBIT 1. COMMONLY USED LEASE TERMINOLOGY

Two basic types of lease are : (a) financial lease and (b) operating lease. Finance lease is further divided into (i) leveraged lease, (ii) sale and lease back, (iii) cross-border lease.

Leveraged lease: Leveraged lease involves lessor, lessee and financier. Lessor (leasing company) provides equity equal to about 25 per cent of the asset's cost while the remaining amount is provided by the financier (a bank or a financial institution), mainly as loan. Leveraged lease is a popular method of financing expensive assets.

Sale and lease back: As discussed in the main text, the lessee first sells asset owned by him to the lessor and then leases it back from the lessor. This provides liquidity as well as possible tax gains to the lessee.

Cross-border lease: In case of cross-border or international lease, the lessor and the lessee are situated in two different countries. Because the lease transaction takes place between parties of two or more countries, it is called cross-border lease. It involves relationships and tax implications more complex than the domestic lease. When the lease transaction takes place between three parties manufacturer/vendor, lessor and lessee in three different countries, it is called *foreign-to-foreign lease*.

There many other terms used by the leasing industry. Some of them are defined below.

Closed and open ended lease: In the close ended lease the asset gets transferred to the lessor at the end, and the risk of obsolescence, residual value etc. remain with the lessor being the legal owner of the asset. In the open ended lease, the lessee has the option of purchasing the asset at the end of lease.

Direct lease: It is a mix of operating and finance leases on a full payout basis and provides for the purchase option to the lessee.

Master lease: Master lease provides for a period longer than the asset's life and holds the lessor responsible for providing equipment in good operating condition during the lease period.

Percentage lease: Percentage lease provide for a fixed rent plus some per cent of the previous year's gross revenue to be paid to the lessor. This ensures protection against inflation.

Wet and dry lease: In the aircraft industry, when the lease involves financing as well as servicing and fuel, it is called wet lease. Dry lease provides only for financing.

Net, net, net lease: In the triple net (net, net, net) lease the lessee is obliged to take care of maintenance, taxes and insurance of the leased asset.

Update lease: Update lease is intended to protect the lessee against the risk of obsolescence. The lessor agrees to replace obsolete asset with new one at specified rent.

CASH FLOW CONSEQUENCES OF A FINANCIAL LEASE

A financial lease has cash flow consequences. It is a way of normal financing for a company. Suppose a company has found it financially worthwhile to acquire an equipment costing Rs 8 lakh. The equipment is estimated to last eight yeas. Instead of buying, the company can lease the equipment for eight years at an annual lease rental of Rs 1.5 lakh from its manufacturer. The company will have to provide for the maintenance, insurance, and other operating expenses associated with the use of the asset in both alternatives- leasing or buying. Assume an investment allowance of 20 per cent, a written-down depreciation of 33 per cent per annum, a borrowing rate of 14 per cent, and a marginal tax rate of 50 per cent for the company.¹ The cash flow consequences of the lease are shown in Table 1. They would be :

Avoidance of the purchase price. The company can acquire the asset without immediately paying for it. Cash outflow saved is equivalent to a cash inflow, there is a cash inflow of Rs 8 lakh.

Loss of tax shield on investment allowance. The company could have availed an investment allowance of Rs 1.60 lakh (Rs 8,00,000 x 20%) and saved taxes (tax shield) equal to Rs 1,60,000 x 50% = Rs 80,000 in the first year if it had bought the equipment. In the leasing of the equipment, it foregoes this amount. It is a cash outflow due to leasing.

Loss of depreciation tax shield. Depreciation is a deductible expense and saves taxes. Depreciation tax shield is equal to the amount of depreciation multiplied by the tax rate for each of the eight years. The company will lose a series of depreciation tax shields when it takes the lease. Table 2 shows the calculation for depreciation tax shields.

After-tax payment of lease rentals. There is a cash outflow of Rs 1.5 lakh per year as lease payment. But these payments will yield tax shield of Rs. $1,50,000 \times .50 = \text{Rs. } 75,000$ per year. Thus, the after-tax lease payments, i.e. cash outflow, would be Rs. $1,50,000 - \text{Rs. } 75,000 = \text{Rs. } 75,000$ per year.

TABLE 1. CASH FLOW CONSEQUENCES OF A LEASE (Rs.)

YEAR	0	2	3	4	5	6	7	8
1. Purchase price	8,00,000	-	-	-	-	-	-	-
2. Lost IA tax shield	-	-	-	-	-	-	-	-
3. Lost dep. tax	-	-	-	-	-	-	-	-
4. Before tax lease rentals	-	-	-	-	-	-	-	-
5. After tax lease rentals	-	-	-	-	-	-	-	-
6. Net Cash flows	8,00,000	-	-	-	-	-	-	-

TABLE 2. DEPRECIATION SCHEDULE AND DEPRECIATION TAX SHIELD

YEAR	0	2	3	4	5	6	7	8
1. Asset's book value	8,00,000	3,55,5	2,37,0	1,58,0	1,05,3	70,23	46,82	31,2
2. Depreciation 33	2,66	1,77,7	1,18,5	79,01	52,67	35,11	23,41	15,6
3. Depreciation Tax shield, 5 x 2	1,33,333	9	9	6	7	8	6	4

The cash flow consequences of leasing depend on the company; it is to be noted that tax shields are available only when the company pays taxes. If the company does not, then depreciation and investment allowance are worth nothing to it. Also, tax shields would vary with the marginal tax rate for the company.

MYTHS ABOUT LEASING

We can now examine the truth about some myths on leasing.¹

Leasing Provides 100 Per Cent Financing

One misconception about leasing is that it provides 100 per cent financing for the asset as the lessee can avoid payment for acquiring the asset. The lessee, it is assumed can preserve his liquid resources for other purposes. When a firm borrows to buy an asset, cash increases with borrowing and decreases by the same amount with the purchase of the asset. It has the asset to use but a liability to repay the loan and interest. In leasing also, the firm acquires the asset and incurs the liability to make fixed payments in future. In practice, therefore, leasing, like borrowing, commits the company for a stream of payments in future.

Leasing Provides Off-the-Balance-Sheet Financing

As the lessee in India is not obliged to disclose his lease liability on the balance sheet it is believed that leasing does not affect the debt-equity ratio while borrowing increases his debt-equity ratio. The myth goes, therefore, that leasing provides off the balance-sheet financing leaving the firm's debt raising ability intact. This is a fallacious argument. First, a debt-equity norm puts a limit on the firm's total borrowings. Its *debt capacity* depends on its debt servicing ability, rather than the balance sheet ratios. Contractual obligations of any form through a lease or loan, reduce debt servicing ability and add to financial risk. Lenders recognise the lessee's cash flow burden arising from lease payments. As a lease uses the firm's debt capacity, it displaces debt.

Leasing can certainly help companies, which have enough debt servicing ability but cannot borrow from banks or financial institutions on account of institutional norms on debt-equity or regulations. Under no circumstances can a lease enhance the firm's debt capacity.

Leasing Increases Performance

Another myth is that the return on investment (profits divided by investment) will increase since a lease does not appear as an investment on the books or the balance sheet. Besides, back-ended leases enable showing higher profits in the initial years of the lease. Such performance ratios are illusory.

A firm's value is affected by the value of its assets and liabilities rather than book profits created through accounting adjustments. A lease will create value to the firm only if the benefits from it are more than its costs.

Leasing Avoids Control of Capital Spending

Another misconception is that leasing does not need capital expenditure screening as no investments are involved. Since a long-term lease involves long-term financial commitments, it ought to be screened accordingly in any good capital expenditure planning and control system. If leasing is not screened and is used to circumvent capital expenditure screening and approval, it may add to the firm's risk, make it vulnerable to business fluctuations, and endanger its survival.

ADVANTAGES OF LEASING

If all these myths are exploded, why then should a company lease instead of following the straight-forward alternative of a secured loan and purchase of the asset? The primary consideration is the cost of lease vs. cost of buying. They can be different. For, if a firm is incurring losses or making low profits, it cannot take full advantage of the investment allowance and depreciation tax shields on purchase of assets. It is, therefore, sensible for it to let the leasing company (lessor) own the assets, take full advantage of tax benefits and expect that the lessor passes on at least some part of the benefits in the form of reduced lease rentals. Both the lessor and the lessee may stand to gain financially.

A part from these tangible financial implications, there are other real advantages to leasing.

Convenience and Flexibility

If an asset is needed for a short period, leasing makes sense. Buying an asset and arranging to resell after use is time consuming, inconvenient and costly.

Long term financial leases also offer flexibility to the user, in India, borrowing from banks and financial institutions involve long, complicated procedures. Institutions often put restrictions on borrowers, stipulate conversion of loan into equity, and appoint nominee directors on the board.¹ Financial leases are less restrictive and can be negotiated faster, especially if the leasing industry is well developed. Yet another advantage of a lease is the flexibility it provides to tailor lessee payments to the lessee's cash flows. Such tailored payment schedules are helpful to a lessee who has fluctuating cash flows.

New or small companies in non-priority sectors such as confectioneries, bottlers and distilleries find it difficult to raise funds from banks and financial institutions in India.

Shifting of Risk of Obsolescence

When the technology embedded in assets, as in a computer, is subject to rapid and unpredictable changes, a lessee can, through a short-term cancellable lease, shift the risk of obsolescence to the lessor. A manufacturer lessor, or a specialized leasing company, is usually in a better position than the user to assume the risk of obsolescence and manage the fast advancing technology. Specialized leasing companies are emerging in India. For example, the Standard Leasing Company leases medical equipments. The Apple Leasing Company leases computers. The Industrial Credit and Investment Corporation of India specialize in leasing for technology development. In fact, in such situations, the lessee is buying an insurance against obsolescence, paying a premium in terms of higher lease rentals.

Maintenance and Specialized Services

With a full-service lease, a lessee can look for advantages in maintenance and specialized services. For example, computer manufacturers who lease out computers are better equipped than the user to provide effective maintenance and specialized services. Their cost too may be less than what the lessee would have to incur if he were to maintain the leased as it. The lessor is able to provide maintenance and other services cheaply because of his larger volume and specialization. He may pass on a part of this advantage to the lessee. We do not yet have in India many integrated specialized leasing companies.

In the face of such myths and realities, how does one evaluate a lease?

EVALUATING A FINANCIAL LEASE

Leasing is a two-step decision for the lessee firm. First, it has to evaluate the economic viability of the asset as an investment. If the asset has a positive net present value, the company should proceed to acquire the asset. Once it has decided to do so, the firm can compare the costs of financing the asset through leasing with that of normal sources of financing.

When the firm finances the asset by normal financing, it takes two steps.¹

Purchases the asset for cash, for say, X.

Purchases the necessary cash by selling a package of financing instruments (debt and/equity), taking into account its

long-term target capital structure, for say, Y.

When the asset is leased, the following two transactions take place simultaneously:

Purchase of the asset for cash, for say, A.

Purchase of necessary cash, for say, B, by (i) giving up the asset's depreciation tax shield, investment allowance tax shield, if applicable, and salvage value of the asset, and (ii) by agreeing to make a stream of cash payments to the lessor.

It is to the firm's advantage to finance the asset by leasing if there is a positive difference, in net present value terms, of B over Y. Thus, in evaluating a lease, a firm should be concerned about how the value of the firm is affected if the lease is used as a "substitute" for normal finance. The net present value of an asset (investment project) is found by discounting the cash flow associated with the use of the asset by the firm's cost of capital, given its target debt-equity structure.

In evaluating the lease, a key question is: at what rate should the cash flows be discounted to arrive to net present values? Should it be cost of capital of the firm or its after-tax borrowing rate? There is much debate on this question. The weight of the arguments, however, is in favor of using affects the firm's capital structure exactly the same way as debt does.

Leasing can be evaluated using either the equivalent loan method or the net advantage of lease method. These are described next.

Equivalent Loan Method

The equivalent loan method of evaluating a financial lease consists of the following steps:

Find out the incremental cash flows from leasing.

Determine the amount of equivalent loan such incremental cash flows can service (explained below).

Compare the equivalent loan so found with lease finance. If the lease finance is more than equivalent loan, the firm should finance the asset by leasing (provided, as explained earlier, the asset is worth having).

Equivalent loan is that amount of loan, which commits a firm to exactly the same stream of fixed obligations as does the lease liability. In our example, the net cash flows from leasing are as given in row 6 of Table 1. These cash flows can be said to "service" the lease. We determine the amount of loan that they can service as follows.

The lease contract was completed with the last year's payment of Rs 82,804. This amount serviced a principal amount at the beginning of the eighth year and the after-tax interest for the eighth year. Let the outstanding amount at the beginning of the eighth year be P. If the interest rate is 14 per cent and tax rate, T, is 50 per cent, then the after-tax interest rate will be: $i(1-T) = .14(1 - .50) = .07$ or 7 per cent. We can write the following equation:

$$1.07P = 82,804$$

$$\frac{82,804}{1.07} = P = \text{Rs } 77,387$$

Thus, the cash flow of Rs 82,804 in the eighth year is apportioned as: principal repayment of Rs 77,387 and an after-tax interest (ATI) for the eighth year of Rs 82,804 - Rs 77,387 = Rs 5,417. The before-tax interest (BTI) paid will be: $ATI + 1-D = Rs 5,417 - H .50 = Rs 10,834$.

The equivalent outstanding loan at the beginning of seventh year would be equal to principal repayments in seventh and eighth year. The principal repaid in the eighth year was Rs 77,387. The after-tax interest in seventh year would be:

$$.07(P + 77,387) = .07P + 5,417$$

The total amount paid in the seventh year was Rs 86,706 (row 6, Table 1). This was for repayment of principal and the after-tax interest in the seventh year. We can write the equation as follows:

$$1.07P + 5,417 = 86,706$$

$$1.07P = 86,706 - 5,417 = 81,289$$

Thus, in the seventh year, the principal repaid is Rs 75,971, The after-tax interest is: Rs. 86,706 - 75,971 = Rs 10,735 and the before-tax interest paid is: Rs 10,735 + .5 = Rs 21,470.

Net Present Value and Net Advantage of Leasing

The net advantage of leasing denotes the incremental advantage over the net present value of buying the asset.

through normal financing channels. A positive net advantage of leasing implies that leasing has an advantage over the net present value of the asset as an investment, which may itself be either positive or negative. A positive net advantage of leasing does not by itself imply that the asset should be acquired. The net present value of the asset should first be assessed as an investment. A positive net advantage of leasing implies advantages to leasing. It is possible that leasing may make a financially unattractive asset investment worthwhile. Suppose the net present value of an equipment is negative Rs 40,000, and the lessor offers it under lease terms that have a positive net advantage to the buyer of, say, Rs 60,000. Then he can acquire the asset by leasing. His overall position would be a net present value of : Rs 60,000 - Rs 40,000= Rs 20,000.

TABLE 3: COMBINATION OF NET PRESENT VALUE OF INVESTMENT AND NET ADVANTAGE OF LEASING

<i>Situation</i>	<i>Net Present Value of Investment</i>	<i>Net Advantage of Leasing</i>	<i>Decision should be</i>
1.	Positive	Positive	Lease
2.	Positive	Negative	Buy
3.	Negative	Negative	Reject
4.	Negative	Positive	Lease if sum of net and net advantage of positive, otherwise

The lessee's overall gain will be enhanced by the positive net advantage of leasing in situation 1, that is, positive net present value (investment) and positive net advantage of leasing will add. In situation 2, the lessee should not lease because it has a negative net advantage of leasing; he should buy the asset through normal financing. One should not set off negative advantage of leasing from positive net present value, since leasing is ruled out. Interpretation of situation 4 also needs caution. The option of buying the asset through normal financing is undesirable, since its net present value itself is negative. The lessee may acquire the asset by leasing if its net advantage more than compensates for the negative net present value of investment.

Can a Lease Benefit Both Lessor and Lessee?

A lease will be taken when it benefits both the lessor and the lessee. It can benefit both when their tax rates differ. The lessor and the lessee determine the attractiveness of the lease rentals given their tax rates. Suppose the lessor has a tax rate of 50 per cent. Then he can take full advantage of tax shields. The present value of the lease cash flows to the lessor is given in Table 6. Note that these cash flows are the same as for lessee except for the change in signs; what the lessee loses the lessor gains and vice-versa.

TABLE 4: PRESENT VALUE OF LESSOR'S CASH FLOWS

<i>Cash Flows</i>	<i>Present Value</i>
Purchase price	-8,00,000
Investment Allowance tax shield	+74,766
Depreciation tax shield	+3,23,071
After-tax lease payment (.SQL, X 5.9713)	+2,9856L,

After-tax lease payment (1-.50) Lf. 5.9713 is the present value factor of an annuity for 8 years at 7 per cent.

The minimum lease payments for the lessor to breakeven would be :

$$\begin{aligned} \text{Net present value} &= -8,00,000 + 74,776 + \\ & 3,23,071 + 2.9856L, = 0 = -4,02,163 \\ & +2.9856L, = 0 \end{aligned}$$

The minimum lease rentals that the lessor should charge to earn 7 per cent after-tax required rates of return is Rs 1,34,700. The monthly rate per Rs 1,000 worth of asset works out at Rs 13.71).

If his investment allowance tax shield is not available, then the breakeven rental increases to Rs 1,59,743. That is equivalent to a monthly rental of Rs 16.26 per Rs 1,000 of the asset.

Let us assume that the tax rate of the lessee is 0. He cannot take advantage of tax shields. The present value to the

lessee of the lease is given in Table 5. The break-even lease payments to the lessee would be as follows. Net advantage of leasing = +8,00,000 - 4.6389L = 0, 8,00,000 ~

The present value factor of an annuity for 96 months (8 years × 12) at the monthly rate of 0.5833 per cent (7% / 12) will be calculated to find out the monthly lease rentals. Thus Rs 10,966 per month is the break-even rental for asset worth Rs 8,00,000. therefore, monthly rental for an asset worth Rs 1,000 is: Rs 10,966 ÷ 800 = Rs. 13.71

$$NPV = -8,00,000 + 74,776 + 3,23,071 + 36,6738L = 0L = -4,02,1637 - 36.6738 = Rs 10,966$$

The maximum lease rental which the lessee will be prepared to pay in present value terms would be Rs 1,72,455. The monthly rental per Rs 1,000 of the asset is Rs 17.37 (at 14 per cent interest rate).

TABLE 5. PRESENT VALUE OF LESSEE'S CASH FLOWS (T=0)

Cash Flows	Present Value
Purchase Price Avoided	+ 8,00,000
Lease Payments	- 4.6389L,

The 4.6389 is present value annuity factor for 8 years at 14 per cent. If cash flows are compounded monthly, the factor for 96 months at 1.17 per cent is 57.5655.

The break-even levels of lease payments of the lessor and the lessee give them adequate room for negotiations. Note that the breakeven lease payments for both lessor and lessee would be the same for them if their rates are the same.

As the actual lease payment in the example is Rs 1.5 lakh, both the lessor and the lessee benefit from leasing. The lessor's gain is : Rs. 1,50,000 - Rs. 1,34,700 = Rs. 15,300 per annum, and the lessee's gain is Rs 1,72,455 - Rs 1,50,000 = Rs 22,455 per annum. The present value of the lessor's gain (at 7 per cent discount rate) is : (1-.50) 15,300 × 5.9713 or Rs 45,680. The present value of the lessee's gain should be calculated at 14 per cent discount rate, since we have assumed that his tax rate is 0. Thus, the present value of the lessee's gain would be : Rs 22,455 × 4.6389 = Rs 1,04,167.

The lessee has benefited because the lessor has passed on a part of the tax shield he got in the form of reduced rentals. The higher the lessor's tax rate and the lower the lessee's rate, the greater are the chances that the lease would be mutually beneficial to both the lessor and the lessee. Table 6 shows how the room for negotiations increases as the difference in the marginal tax rate of the lessor over that of the lessee increases.

TABLE 6: LESSEES BREAK-EVEN VALUE TO

Value of rentals to lessor given his

Lessee's tax		0.0	0.3	0.5	0.6
Rate					
.0		0	74.506	1.12.731	1.26.7
.3		-91.877	0	53.597	76.7
.5		-1,75,152	-	0	31.4
.6		-2,32,942	(-	(-	(0

Table 6 shows that breakeven lease payments of the lessee and the value of those rentals to the lessor for different combinations of their tax rates. It can be seen from Table 6 that leasing pays if the lessee's marginal tax rate is less than that of the lessor, in fact, in a lease, the lessee sells his depreciation tax shields to the lessor. For example, when the lessee's tax rate is 30 per cent, his tax shields are worth Rs 2,90,220 in present value terms, if he buys the asset. This is lessee's cost of giving away tax shields to the lessor. To a lessor with a marginal tax rate of 50 per cent these tax shields are worth Rs 3,44,241 in present value terms. The lessor will induce the lessee to lease the asset (instead of buying it) by offering him a part of the value of tax shields.

In the absence of taxes, it is hard to believe that leasing would be advantageous if the capital markets are reasonably well functioning.

Where Do Leasing Benefits Come From?

How can both the lessee and the lessor benefit from a lease? Both gain at government's expense because of the difference in their tax rates. The government gains from the tax on lease rentals while it loses on depreciation and interest tax shields. The implicit principal payments in a lease rental are shielded by depreciation, while interest deductions provide for implicit return on the lessee's capital. With a positive interest rate and accelerated depreciation, the government's receipts of tax on lease rentals will fall short, in present value terms, of depreciation and interest tax shields.

Consider the example given. The gain to the lessor was Rs. 45,680 and to the lessee Rs 1,04,167 adding up to Rs 1,49,847. This is exactly the net loss to the government as shown in Table 7.

TABLE 7. LESSEE'S AND LESSOR'S BENEFITS EQUAL GOVERNMENT LOSS

	Rs.
<i>Loss: Present Value of :</i>	
Depreciation tax shield (1)	- 3,97,837
Interest tax shield on displaced debt (2)	- 1,99,860
<i>Gain : Present Value of :</i>	
Tax on lease rentals (3)	+ 4,47,847
Net Loss to the Government	- 1,49,847

Note :

- (1) Depreciation and investment allowance tax shields are taken from Table 6. It is assumed that the lessor can avail them and borrow against them.
- (2) The lessor's rentals are similar to the fixed obligations under debt. Thus, under an equivalent loan situation, the government would have received tax on interest. The present value of the tax is the difference between present value of rentals at the 7 per cent adjusted cost and present value of rentals at the 14 per cent cost of capital. Thus $(5.9713 - 4.6389) \times 1,50,000 = \text{Rs. } 1,99,860$.
- (3) The present value of tax on lease rentals received by the government equals: $.50 \times 1,50,000 \times 5.9713 = 4,47,847$.

Net Advantage of a Lease (NAL) Including Operating Costs and Salvage Value

How do we incorporate analysis of operation cost mid salvage value in the lease evaluation?

The following equation can be used to find out NAL:

where A is purchase price of the asset. T is the tax rate of the company. L is the lease rental paid in year. $TDEP_t$ is the depreciation tax shield in year t and i is the interest rate.

We have so far assumed that the asset has no salvage value at the end of its life and that the lessee firm will incur the maintenance, insurance, and other operating costs associated with the leased asset. Under a full-service lease, the lessor may bear the maintenance, insurance, and operating costs. If so, the present value of the lease to the lessee will increase by the present value of the stream of after-tax operating costs. On salvage value, the value of the lease to the lessee will decline by the after-tax proceeds from the sale of assets at the end of its economic life. Both operating costs and salvage value are difficult to predict. Therefore, they should be discounted at a rate higher than the firm's borrowing rate. There is a fair degree of unanimity among academicians about using the firm's cost of capital for discounting operating costs and salvage value. We can modify Equation (1) as follows to calculate the net advantage of leasing:

$$\frac{\sum_{t=1}^n (1-T)QC_t - S_n}{(1+k)^t}$$

where S_n is the salvage value, k is the after-tax cost of capital of the firm, OC_t is the operating cost in year t and S_n is the salvage value of the leased asset at the end of the life, n . As per the latest tax rules in India, salvage value is not taxed rather the depreciable value of the asset is adjusted.

In the example used so far, suppose the equipment manufacturer agrees to maintain the asset and that it would have cost the lessee firm Rs 4,500 per annum. Also, let the estimated salvage value of the equipment be Rs 18,000. Assume a 14 per cent after-tax cost of capital for the lessee firm. The present value (PV) of the lease will increase by:

$$\text{PV of after-tax operating cost} = \frac{4500}{(1.14)^t}$$

$= 2.250 \times 4.6389 = \text{Rs } 10.438$ and

decrease by

$$\text{PV of after tax salvage value} = \frac{18,000}{(1.14)^8}$$

$$= 18,000 \times 0.3506$$

$$= \text{Rs. } 6,311$$

Thus, the net advantage of the lease will be :

$$\begin{aligned} \text{NAL} &= -45,684 + 10,438 - 6,311 \\ &= \text{Rs. } -41,557 \end{aligned}$$

The lease finance is still disadvantageous

GOVERNMENT POLICY IMPLICATIONS

It is clear that the most obvious financial justification for leasing is the maximisation of the utilization of tax shields by the lessee and the lessor. A large number of companies in India are being created with the objective of exploiting the tax laws. Tax planning is an accepted business practice. In a bid to minimize tax liabilities, a number of companies in India have set up "captive" leasing companies. Such leasing companies enable trading or tax shields. They may not fill any gap in business financing or perform other economic functions. From a macro economic perspective, it is necessary to ensure that leasing companies are not created merely to trade in tax shields at government's cost; they should provide real advantages that boost up investment and productivity.

Leasing could be advantageous to society if its social benefits outweigh the loss in taxes. Can leasing give a boost to investment and production? Investment activities of firms depend on the availability of profitable business opportunities, rather than merely on availability of funds. Shortage of investable funds, however, constrains investment and therefore, production. Leasing is an alternative to normal financing. Due to the fact that leasing companies would be drawing their funds from sources such as the capital markets, banks, and financial institutions, which are directly available to user-firms, it is doubtful that they will help in enlarging investable funds.

Leasing companies can play a role as financial intermediaries. They can encourage investment by making funds available in a less cumbersome and speedy way. Also, the tax shields from a lease may be reinvested for accelerating growth. On the other hand, lease financing is a real gap-filler for non-priority and small-scale sectors. Thus, leasing is another alternative financing instrument that can help some segment of the manufacturing industry to grow. Consumers could gain from leasing if part of taxes-saved are passed on to them in the form of reduced prices.

The objective of government, banks, and financial institutions should be to create policy and market conditions so that the leasing activity contributes to economic growth and financial efficiency.

SUMMARY

A lease is an agreement for the use of the asset for a specified rental. The owner of the asset is called the lessor and the user the lessee. Two important categories of leases are: operating leases and financial leases. Operating leases are short-term, cancellable leases where the risk of obsolescence is borne by the lessor. Financial leases are long-term non-cancellable leases where any risk in the use of the asset is borne by the lessee and he enjoys the returns too.

The most compelling reason for leasing an equipment rather than buying it is the tax advantage of depreciation which can mutually benefit both the lessee and the lessor. Other advantages include convenience and flexibility as well as specialized services to the lessee. In India, lease proves handy to those firms, which cannot obtain loan capital from normal sources.

Financial lease involves fixed obligations in the form of lease rentals. Thus it is like a debt and can be evaluated that way. Given the lease rentals and tax shields, one can find the amount of debt, which these cash flows can service. This is equivalent loan. If equivalent loan is more than the cost of the asset it is not worth leasing the equipment. You can also approach lease evaluation by calculating the net advantage of lease (NAL). After-tax lease rentals and tax shields may be discounted at the after-tax borrowing rate while operating costs and salvage value at the firm's cost of capital to find out NAL.

ILLUSTRATIVE PROBLEM

A company is considering the lease of an equipment which has a purchase price of Rs 3,50,000. The equipment has an estimated economic life of 5 years. As per the Income Tax Rule a written down depreciation at 25 per cent is allowed. The lease rentals per year are Rs 1,20,000. The company's marginal corporate tax rate is 50 per cent. If the before-tax borrowing rate for the company is 16 per cent, should the company lease the equipment?

Solution :

The following table shows the cash flow consequences of the lease and its net present value:

Year	Net Present Value of Lease					
	0	1	2	3	4	5
Purchase price	3,50,00	-	-	-	-	-
Lost depreciation tax shield		-	-	-	-	-
After-tax lease		-	-	-	-	-
Net cash flows	3,50,00	-	-	-	-	-
PV at 8%	3,50,00	-	-	-	-	-
NPV	- 747	-	-	-	-	-

Notes: 1. Depreciation is calculated at 25 per cent (WDV) as follows :

Year	1	2	3	4	5
Dep.	87,500	65,625	49,219	36,914	2,768

2. Lost tax shield on depreciation is depreciation multiplied by tax rate.

3. Salvage value is assumed to be zero.

The net present value of lease is negative. The company may like to purchase the equipment. The purchase option would still be better if the equipment has a salvage value at the end of its economic life.

Accounting Entries In The Books of Lessee:

The student of Accounting should have the knowledge of accounting entries for financial lease. Remember that generally in practice the financial lease is for a term that coincides with the useful life of the asset. Though the title of the leased asset stays with the lessor yet the substance of the lease transaction is that the lessee is the owner and user of the item (or asset) in practical. That is the reason that in case of financial lease the asset (or item) is recorded in the books of lessee as an asset as well as liability. The fair value of the item is considered record in the books of accounts. Here, one more thing should be taken care of regarding the fair value and minimum lease payment (MLP). If the fair value is greater than the present value (or discounted value of lease payments) of MLP then the amount of present value will be shown in the records of books. The cost of the asset on lease also includes the initial direct cost made for negotiating and securing lease arrangement and contract. The payments made by lessee to the lessor are classified as finance charges and reduction in the outstanding liability. It will be made clear in example after this paragraph. As far as depreciation on leased item is concerned that is charged according to the guidelines in Accounting-Standard Number-6 of ICAI (AS-6). The AS-6 is given in the last of this chapter. Also AS-19: Leases given after AS-6. Students need knowledge of these. A- standards for unit 5 and for concerned topics.

The accounting entries by lessee will be as under :

1. When the asset is taken over from lessor on lease asset (on lease) A/c..... Debit
To lessor.

(Being the asset taken on lease)

Note : The amount in the above entry will be lower of :

- (a) Fair value of the asset on lease.
- (b) Present value of MLP for lessee. This present value is calculated by applying the interest rate implicit in the lease. When this interest rate is found impracticable the present value is calculated by using lessee's incremental borrowing rate.

2. When lessee incurs initial direct cost in securing the asset on lease :

Asset (on lease) A/c..... Debit.
To Bank A/c

3. When the finance charges are given by the lessee at the end of the period:

Finance charges A/c..... Debit
To Bank A/c.

4. When the payment of periodic lease payment is made to lessor :
Lessor..... Debit.
To Bank A/c
5. When the depreciation on leased asset is charged :
Depreciation on leased asset A/c.....Debit
To Asset (on Lease) A/c
6. When the finance charges and the depreciation are transferred to P&L A/c:
Profit & Loss A/c.....Debit
To Depreciation on leased Asset A/c
To Finance charges A/c

Example 1 : Mr. Gudhal came into the possession of an asset through lease system for 4 years from Mr. Ashu, the vendor. The asset was acquired on January 1, 2000. The carrying value of the asset was Rs. 1,71,000 in books of Ashu. Mr. Gudhal incurred Rs 3,000 and Mr. Ashu incurred Rs. 3,300 in connection with negotiating and securing the lease. The amount payable by Mr. Gudhal is in four instalments as given below:

On January 1, 2000, Rs. 1,05,000; On December 31, 2000, Rs. 48,000; On Dec 31, 2001, Rs. 24,000; On December 31, 2002 Rs. 13,500; On December 31, 2003 Rs. 9,000.

The cost of financing the lease is 14% p.a. for Mr. Gudhal. The depreciation on the asset is to be charged on Straight Line Method. The lessee, Mr. Gudhal has also given the guarantee of 5% of cost of asset (to him) to Mr. Ashu at the end of the economic life of the leased asset. You are to determine the nature of lease and to make relevant Journal entries in Gudhal's books. Also prepare necessary accounts in lessee's books.

Solution:

To determine the status of lease (operating or finance), the present value of installments paid by Gudhal (the lessee) should be calculated. That is calculated here as under in the Table A.

Table A : Showing calculations of Present value lease payments made by the lessee.

Year	Amount of Payment Through installment	Discount factor	Present value of Lease Payment
	Rs.		Rs.
0.	1,05,000	1.0000	1,05,000.00
1.	48,000	0.8772	42,105.60
2.	24,000	0.7695	18,468.00
3.	13,500	0.6750	9,112.50
4.	9,000	0.5921	5,325.90
	1,99,500		1,80,015.00

So it may be said that the lease is of finance nature (*i.e.* finance lease) because the present value is almost equal to fair value of Rs. 1,80,000 given in the example. The difference of Rs. 15 is due to discount factors.

Further, before making the journal entries, it is necessary to find out the finance charges (also known as unearned finance income for the lessor). It should be noted here that the finance charges are included in installments of lease payments. The following Table B shows such calculations.

Table B

Year	Finance Charges on outstanding Liability	Payment made	Decrease in outstanding Liability (3-2)	Outstanding Liability
1	2	3	4	5
	Rs.	Rs.	Rs.	Rs.
01.01.2000	-	1,05,000	1,05,000	75,000
31.12.2000	10,500	48,000	37,500	37,500

31.12.2001	5,250	24,000	18,750	18,750
31.12.2002	2,625	13,500	10,875	7,875
31.12.2003	1,125	9,000	7,875	-
	19,500	1,99,500	1,80,000	1,39,125

Thus, the following points are clear from the above calculations :

Total investment in the lease	=	Rs. 1,99,500
Net investment in the lease	=	Rs. 1,80,000
Finance charges in the lease	=	Rs. 19,500
Fair value of asset at starting of lease	=	Rs. 1,80,000

Journal of Gudhal

Date	Particulars	L.F.	Amount (Dr)	Amount (Cr)
01.01.00	Leased Asset A/c	Dr.		1,80,000
	To Ashu			1,80,000
	(Being the asset taken on lease entered on fair value)			
	Leased Asset A/c	Dr.	3,000	
	To Bank A/c			3,000
	(Being the expenses incurred on securing the lease)			
	Ashu	Dr.	1,05,000	
	To Bank A/c			1,05,000
	(Being the initial instalment paid)			
31.12.00	Finance Charges A/c	Dr.	10,500	
	To Ashu			10,500
	(Being finance charges due entered)			
	Ashu	Dr.	48,000	
	To Bank A/c			48,000
	(Being second instalment paid)			
	Depreciation on leased asset A/c	Dr.	45,750	
	To leased asset A/c			45,750
	(Being depreciation charged on leased asset)			
	Profit & Loss A/c	Dr.	56,250	
	To Depreciation on leased asset A/c			45,750
	To Finance charges A/c			10,500
	(Being finance charges and depn. or leased assets transferred to P&L A/c)			
31.12.01	Finance charges A/c	Dr.	5,250	
	To Ashu			5,250
	(Being finance charges due entered)			

	Ashu	Dr.	24,000	
	To Bank A/c			24,000
	(Being third instalment paid)			
	Depn. on leased Asset A/c	Dr.	45,750	
	To Leased Asset A/c			45,750
	(Being Depreciation charged on leased asset)			
	P&L A/c	Dr.	51,000	
	To Depreciation on Leased Asset A/c			45,750
	To Finance Charges A/c			5,250
	(Being Depreciation & finance charges transferred to P&L A/c)			
31.12.02	Finance charges A/c	Dr.	2,625	
	To Ashu			2,625
	(Being finance charges due entered)			
	Ashu	Dr.	13,500	
	To Bank A/c			13,500
	(Being fourth instalment paid to lessor)			
	Dep. on Leased Asset A/c	Dr.	45,750	
	To Leased Asset A/c			45,750
	(Being Depreciation charged on leased Asset)			
	Profit & Loss A/c	Dr.	48,375	
	To Depreciation on leased Asset A/c			45,750
	To Finance Charges A/c			2,625
	(Being Depreciation and finance charges transferred to P&L A/c)			
31.12.03	Finance charges A/c	Dr.	1,125	
	To Ashu			1,125
	(Being finance charges due entered)			
	Ashu	Dr.	9,000	
	To Bank A/c			9,000
	(Being guaranteed residual value paid)			
	Dep. on Leased Asset A/c	Dr.	45,750	
	To leased Asset A/c			45,750
	(Being Depreciation charged on leased asset)			
	Profit & Loss A/c	Dr.	46,875	
	To Depreciation on leased asset A/c			45,750
	To Finance Charges A/c			1,125
	(Being Depreciation & finance charges transferred to P&L A/c)			

Notes :

1. Depreciation has been charged on Rs. 1,83,000 (Rs. 1,80,000 of fair value plus Rs. 3,000 of expenses on negotiating the leased on SLM as per AS-6 and AS-19 guidelines.
2. AS-19 is regarding leases. This standard speaks about the depreciation charge on leased asset as below :
 - (i) Determine the tenor or period during which the asset will be depreciated. The tenor will be:
 - (a) Economic- Life of the leased asset if the lessee were to obtain ownership at the end of lease term.
 - (b) If the lessee were not to obtain such ownership the lease term or economic life which ever is shorter.
3. In this question, solved as above, nothing is clear about the ownership, therefore the lease term is considered as tenor. (i.e., 4 years.)

Main Accounts In Gudhal's Books :**1. Ashu (The Lessor)**

	Rs.		Rs.
01.01.00 To Bank A/c	1,05,000	01.01.00 By Leased Asset A/c	1,80,000
31.12.00 To Bank A/c	48,000	31.12.00 By Finance Charges A/c	10,500
To Balance c/d	37,500		
	1,90,500		1,90,500
31.12.01 To Bank A/c	24,000	01.01.01 By Balance b/d	37,500
To Balance c/d	18,750	31.12.01 By Finance Charges A/c	5,250
	42,750		42,750
31.12.02 To Bank A/c	13,500	01.01.02 By Balance b/d	18,750
To Balance c/d	7,875	31.12.02 By Finance Charges A/c	2,625
	21,375		21,375
31.12.03 To Bank A/c	9,000	01.01.03 By Balance b/d	7,875
		31.12.03 By Finance Charges A/c	1,125
	9,000		9,000

2. Leased Asset A/c

	Rs.		Rs.
01.01.00 To Ashu (Lessor)	1,18,000	31.12.00 By Depreciation A/c	45,750
To Bank A/c	3,000	By Balance c/d	1,37,250
	1,83,000		1,83,000
01.01.01 To Balance b/d	1,37,250	31.12.01 By Depreciation A/c	45,750
		By Balance c/d	91,500
	1,37,250		1,37,250
01.01.02 To Balance b/d	91,500	31.12.02 By Depreciation A/c	45,750
To Bank A/c	3,000	By Balance c/d	45,750
	91,500		91,500
01.01.03 To Balance b/d	45,750	31.12.03 By Depreciation A/c	45,750

Example 2. Reconsider example 1 by making only one change of lessee's guarantee. Now, say, lessee guarantees only 2% of fair value whereas the residual value is 5% of fair value. With this change, find out the present value of MLP, finance charges and the Depreciation. Also prepare accounts in the books of lessee.

Solution : Present value will be calculated same as in example 1 upto 3 years. But in 4th year, the lease payment comes to Rs. 3,600 (i.e. 2% of Rs. 1,80,000). Its present value will be = Rs. 3,600 x .5921 = Rs 2,131.56. So, the total of present value of MLP's will be = Rs. (1,05,000 + 42,105.60 + 18,468 + 9,112.50 + 2,131.56) = Rs. 1,76,818 (approx).

Now, PV of MLP < FV. Therefore,

- (i) Lease-Asset and Vendor's (i.e., Ashu's) account will be opened with Rs. 1,76,818;
- (ii) Depreciation will be charged of Rs. 44,955, i.e., [(Rs.1,76,818 + Rs. 3,000) ÷ 4] every year
- (iii) Finance charges now will be of changed amount on 31.12.00 = Rs. 10,054, 31.12.01 = Rs. 4,740, 31.12.02 Rs.2,046 on 31.12.01 = Rs.444.
- (iv) Outstanding liabilities will be of: Rs. 71,818 (on 1.1.00), Rs. 33,870 (on 31.12.00), Rs. 14,610 (31.12.01) and Rs. 3,156 (on 31.12.2002).

Now, Journal entries and Ledgers may be prepared by the student like example.

Books of Lessor/Vendor for Finance-Lease :

The finance-lease transaction stands recognized as an asset and liability in the books of lessee. It follows, therefore, the lessor can not account for the same item as an asset. What is a liability (dues to) for lessee will get reflected in the books of lessor as receivables (dues from). The AS-19 recognizes it and stipulates as under:

The lessor should recognize assets given under a finance lease in its balance sheet as a receivable at an amount equal to the net investment in the lease. The recognition of finance income should be based on a pattern reflecting a constant periodic rate of return on the net investment of the lessor outstanding in respect of the finance lease.

The students should understand the following :

- * Net Investment in Lease = Gross Investment in Lease – Unearned finance income.
- * Gross Investment in Lease = Aggregate of MLP + Any unguaranteed residual value.
- * Unearned Finance Income = Gross Investment – Present value of MLP.
- * The cost of sales (of leased item) = Cost of leased item (or asset) also termed as carrying – amount: present value of unguaranteed residual value.
- * The Sales Revenue = Fair value or the present value of Minimum lease payments if those are less than the fair value.
- * The Initial Profit = Sales Revenue – Cost of sales.
- * The direct costs incurred by the lessor in arranging and finalizing the lease contract is charged immediately from P&L A/c or allocated against the finance income over the lease term.
- * The Journal Entries in lessor's books will be :

(1) Lessee or Lease Purchaser Dr
 To Sales on Lease A/c
 To Leased Asset A/c

(Being the finance-leased asset sale made)

Note : Dr. amount in this above journal entry will be equal to **net- investment** in lease, credit amounts will be "present value of MLP" and "the present value of unguaranteed residual value" for sales on lease a/c and leased asset a/c respectively. These credited accounts are transferred to Trading Account at the end of the year to determine the profit & loss.

(2) Expenses on lease A/c	Dr.	Exps. Incurred by the
To Bank A/c		Lessor
(3) For finance charges made by lessor :		
Lease Purchaser A/c	Dr.	
To finance charges A/c		
(4) Bank A/c	Dr.	
To Lessee		
(5) Finance charges A/c	Dr.	Transfer entry
To P&L A/c		
(6) For the balance of Lessee's A/c :		
Lessee	Dr.	

To P&L A/c

(Being the credit balance of lessee transferred)

(7) Reverse to '6' if Dr. balance of Lessee's A/c

Example 3. Use the information given in Example 1 and prepare the necessary accounts in the books of lessor Mr. Ashu.

Solution: (Ashu's Books)

Sales on Lease A/c					
Rs.			Rs.		
31.12.00	To Trading A/c	1,80,000	01.01.00	By Lesee (Gudhal)	1,80,000
Rs.			Rs.		
01.01.00	To Sales on Lease A/c	1,80,000	01.01.00	By Bank A/c	1,05,000
	To Leased Assets A/c	-	31.12.00	By Bank A/c	48,000
31.12.00	To Finance Charges A/c	10,500		By Balance c/d	
1,90,500			1,90,500		
01.01.01	To Balance b/d	37,500	31.12.01	By Bank A/c	24,000
31.12.01	To Finance Charges A/c	5,250		By Balance c/d	18,750
42,750			42,750		
01.01.02	To Balance b/d	18,750	31.12.02	By Bank A/c	13,500
31.12.02	To Finance Charges A/c	2,625		By Balance c/d	7,875
21,375			21,375		
01.01.03	To Balance b/d	7,875	31.12.01	By Bank A/c	9,000
31.12.03	To Finance Charges A/c	1,125			
9,000			9,000		

Trading and Profit and Loss Account

For the year ending on 31.12.00

Rs.			Rs.		
To Leased Asset A/c	1,77,000	By Sales on Lease A/c	1,80,000		
To Profit transferred to P & L A/c	9,000				
To Lease Expenses A/c	3,300				

And, so on for the next years.

Note : It may be reminded here that the AS-19 has been considered while solving the examples.

Accounting Treatment of Operating-Lease In the Books of Lessee: It is important to mention again here that risks and rewards incidental to ownership rest with the lessor in case of operating lease. The lessee has concern to these two items. Lease-Payments are the significant aspect for accounting treatment of operating lease.

Lease payments should be taken as expenses in the statement of Profit & Loss on a straight-line basis over the lease term unless another systematic basis is more representative of the time pattern of the user's benefit. As far as MLP's and contingent rents are concerned, these should be separately shown by the lessee. During the lease period, if any amount is recovered by the lessee should be recorded in Profit and Loss account of the concerned period year.

Lessor's Books: With regard to operating-lease, the lessor recognizes the lease income that is received by him as periodical-rent. The lessor should:

Present an asset given under operating-lease in the Balance-Sheet under Fixed-Assets.

Depreciate the asset (leased one) on a basis consistent with the normal depreciation policy of the lessor for similar assets as per Accounting-Standard-6.

When Manufacturer of Dealer undertakes leasing Activities: The accounting treatment in such cases is made differently. It is well known to the commerce students now that this primary activity of a manufacturer or dealer is to undertake direct sales. In addition, he or she may also undertake leasing of manufactured (or traded) goods in order

to promote sales partly or solely. In such case, the to determine the accounting treatment, the prescribed tests should be applied to see if such leases are Finance leases or the operating leases.

If Finance Lease: A finance lease provided by manufacturer/dealer would comprise two components of income (i.e. selling profit and income on lease finance). The Rule is:

Selling profit is to be recognized immediately (normal selling profit).

Income on lease finance is spread over lease term.

Computation of Selling Profit by Lessor: Profit on sale is to be recognized by the Manufacturer/ Dealer after reckoning two elements. These two elements are Sales Revenue and Cost.

Sale Revenue is to be recognized after knowing the fair-value of the asset sold on lease and the present value of minimum lease payments computed at commercial rate of interest. Then recognize lower of these two consider the following case :

	Alternative 1	Alternative 2
Fair Value	5,00,000	5,00,000
Present Value of MLP's	4,80,000	5,20,000
Sales Revenue to be Recognized	4,80,000	5,00,000

Cost : The cost of the leased item is to be recognized with reference to (i) Cost recognized at the inception of lease. or (ii) Carrying amount of leased asset less any unguaranteed residual-value. Now, consider the following case:

Particulars	Amount
	Rs.
Cost or carrying amount	4,50,000
Less : Present value of	
Unguaranteed residual value	10,000
Net Amount (It is to be reckoned As.cost)	4,40,000

Example showing selling-profit given below :

	Rs.
Fair value	5,00,000
Cost at the commencement of lease	4,50,000
Down Payment	20,000
Period of lease	24 months
Gross investment in lease	5,24,000
Sales value to be recognized	5,00,000
Selling Profit	50,000
Initial Direct Costs (Selling Expenses)	8,000
Profit on sale	42,000
Finance income to be spread over the Lease-term 24 months	24,000

Low Rate of Interest and Finance Lease of Manufacturer/Dealer :

The accounting treatment for a finance lease arrangement of manufacturer/dealer is basically on-par with any other finance lease except for an enquiry into the rate structure built into the financial lease. It commercial rate of interest is reckoned, one can proceed with determination of selling profit and lease income.

However, if the rate of interest is kept artificially lower than the commercial rate in order to affect customers the difference is to be adjusted against normal selling Profit. Consider the example given below:

S.No.	Cost	Sales Value	MLP (Total)	Profit on Total Deal	Finance Charges	Sale Profit
A	B	C	D	E	F	G
1	6.0	6.5	7.5	1.5	1.0	0.5
2	6.0	6.5	7.5	1.3	1.0	0.3

If Operating Lease : There is no sale in case of operating lease. So, no selling profit or loss. As such, the manufacturer dealer should not recognize any setting profit.

Treatment of Initial Direct Costs : Lease transactions often require lessors and lessees to incur certain costs directly include legal expenses, consultation fees, commission by the lessor and/or by the lessee. The treatment of such costs is tabulated below :

Party	Finance Lease	Operating Lease
- Lessee (s)	Capitalise	Charge
- Lessor (s) being a dealer/manufacturer	Charge	Charge
- All other Lessors	Charge or defer over lease period in proportion of finance-charges	Charge or defer over the lease period in proportion of recognition of rental income.

Sale and Lease Back : This type of arrangement is a form of raising resources with existing assets. It consists of sale of asset by vendor and taking back the same asset on lease, which could either be a **Finance-Lease** or operating-lease. The Accounting-Treatment for such Finance-lease or operating lease is the same as explained earlier to it. A sale and lease back transaction may result in either profit or loss to the original-vendor (new lessor). The AS-19 standard deals with accounting treatment of mainly the profit or loss on sale of asset in the books of vendor. The AS-19 lays down the following rules:

Rule 1 : Financial Lease : The Profit or loss arising from a sale and lease back resulting in finance-lease should not be recognized as gain/loss in Profit & Loss A/c. It should instead be deferred and amortized over the useful life of asset in proportion to depreciation of leased asset. The rationale for this treatment is that the transaction of an asset being sold and taken back under finance lease results in the same asset being capitalised at a different amount. The net effect is very similar to revaluation. Hence, treatment of profit or loss is similar to treatment of revaluation surplus viz, write back over remaining life of the asset.

Rule II. Operating Lease : The profit or loss arising from a sale and lease back resulting in operating lease should be accounted for taking into cognizance of the following aspects:

- Asset is not capitalised by lessee but by lessor.
- Sales price, fair-value of the asset, and carrying amount in the books of lessee (prior to sale and lease back) are to be considered.

Disclosure Requirements In the Books of Lessee (AS-19)

For Finance Lease	For Operating Lease
All assets under lease should be segregated from Owned assets and shown separately	_____
Net carrying amount for each class of asset	_____
Finance Charge recognized in P & L A/c	Lease payments recognized in P & L A/c classified into (a) MLP and (b) Contingent rent.
A reconciliation between MLP & PV on Balance-Sheet Date.	_____
An age-wise break up of MLP & PV Classified into	Total of future MLP classified into
Upto one year	Upto one year
>1 year <= 5 years	>1 year <= 5 years
>5 years	>5 years
Total future minimum sub-lease payments, if any Contingent rent if any recognized as income in P&L A/c	Total future minimum sub-lease payments, if any Contingent rent if any recognized as income in P&L A/c
Significant terms under lease agreement, such as :	Significant terms under lease agreement, such as :
Basis of recognition of contingent rent.	Same

Clauses governing renewals purchase option, or
Escalation Same
Restrictive covenants, if any, e.g. dividends,
additional debt, further leasing etc. Same
Liability should be disclosed separately as 'long-term'
And 'current-liability'

Note : It is all as per Accounting Standard -19.

Disclosure Requirements in the books of Lessor :

The disclosure of leasing business is shown in addition statutory-Disclosures and not lieu these of, see the following for lessor's disclosures.

For Finance Lease	For Operating Lease
A reconciliation between gross Investment in lease and present value of MLP & on B/S date.	For each class of asset: Gross carrying amount, accumulated depreciation, Impairment of Assets if any, Net carrying amount.
An age- wise break up of both Gross Investment, and PV of MLP classified into :	Future MLP's (for all operating leases), classified into :
upto one year	upto one year
> 1 year ≤ 5 years	> 1 year ≤ 5 years
> 5 years	> 5 years
Unearned finance income	Amounts to be shown in P&L A/c separating for : Dep. For CY. Impairment losses either charged or reversed in CY.
Unguaranteed RV accruing to lessor	Finance income recognized in P&L A/c, and the basis for recognition if not on SLM basis.
Total accumulated provisions for Uncollectible lease receivables.	---
Contingent rent recognized in the statement of P&L A/c.	Same
Significant terms under lease agreement	Same
Accounting Policy adopted for initial direct costs.	Same

AS-19 : Leases : The students are directed to get a good knowledge of Accounting-Standard-19 pertaining leases. This standard is well explained in the Chapter of Accounting Standards.

CHAPTER-20

SOCIAL ACCOUNTING

Origin of the concept

Father of the modern Economics Adam Smith was the first to talk about Social responsibility of business as early as in 1776. Karl Marx in 1876 has also given the reference of Social Cost in his famous book *Das Kapital*. Engles in 1844 has said that if there is more industrialisation there will be environmental pollution. Veblen in 1919 and Sis monde in 1927 point out about social cost. Pigou in 1932 had talked about social and private cost. The term was systematically introduced by professor Hicks in 1942. According to him it means "the accounting of the whole community or nation, just as private accounting is the accounting of individual firms. Modern Economics like Mrs. Joan Robinson in 1960 and Chambrlein in 1945 has directly or indirectly expressed their Concern about social accounting. Linowes in (1968), Ralph Eastes, Seidler and Seidler in (1973), Elliot (1975), Acts in (1977), Basely and Evan in 1978, has also explained the concept in detail.

Meaning of Social Accounting

According to Professor Stone "It denotes the economic accounts of society, social accounting then, is concerned with the statistical classification of the activities of human beings and human institutions in ways which helps us to understand the operation of the economy as a whole."

Social accounting does not end with classification of economic activity and it also embraces the application of the information thus assembled to the investigation of the operation of the economic system.

Social Accounting at the Macro Level, its purpose is the measurement and disclosure of economic and social performances of nations. Social Economic accounting includes, therefore, social measurement, social accounting and reporting and the role of accounting in economic development.

At Micro level its purpose is the measurement and reporting of the impact of organisational behavior of firms on their environment. Social accounting includes financial and managerial social accounting and reporting and social auditing. Social accounting is a rational assessment of and reporting on some meaningful, definable domain of a business enterprise activity that have social impact. This aims at measuring (either monetary or non-monetary units) adverse and beneficial effects of such activities both on the firm and on those affected by the firm. Being conserved with the social, human and environmental constraints on organisational behaviour, it measures social costs and benefits. It can also be defined as integration of management accounting with the national economics. Practically it is an accounting of national welfare, growth prosperity and finally the well being of the entire community. Broadly it can be termed as National Income Accounting.

Kohler defined social Accounting as the application of double entry bookkeeping to social economic analysis. But this is an orthodox definition as it is based on application of bookkeeping principles rather than sophisticated techniques of management accounting to national socio-economic situation. Now the social Accounting is used for toning up the economic health of a nation.

Eastes defined it as "the measurement and reporting, internal and external of informational concerning the impact of an entity and its product and service contribution include activities intended to benefit the total environment of the firm.

Seidler and Seidler defined "Social accounting as modification and application of conventional accounting to the analysis and solution of problems of a social nature.

The American Accounting Association's (AAA) Committee on Accounting for social performance (1975) could not come with specific definition of social Accounting. The committee suggested a broad description which include:

- (i) Accounting for and evaluating of the impact of corporate social responsibility programmes
- (ii) Human Resource Accounting
- (iii) Measurement of selected social cost
- (iv) Measuring the full impact of an entity on society
- (v) Social Reporting (Reporting results of items (i to iv)
- (vi) Accounting for public (Government) Programmes.

There is no consensus among the professionals and academicians about the terminology to be used for social Accounting. Linowes (1968) and Gambling (1974) have used the term 'Social Accounting'. Elliot used the term 'Social Responsibility Accounting'. Sethi (1973) and Beesley and Evans (1978) used the name 'Social Audit'. Johnson (1979) Partica (1983) preferred the term "Corporate social Performances" Ahmed Belkavvi (1-985) named it as 'Social Economic Accounting.

Difference between Social Accounting and Social Audit :

From the above definition and views it can be stated that 'Social Accounting' to mean identification, measurement recording and reporting of corporate activities which permit informed decision making with respect to social activities of the firm having direct or indirect effect on the very fabric of (he society at large, while 'Social Audit would mean enquiry into the corporate social Accounting records and outside agency that can opine with a view to attestation and authentication of such records and reports . More precisely and correctly 'Social Accounting' is concerned with the development of measurement systems to monitor social performance and the social auditing is often equated with the use of independent auditing firm to verify records of social performance.

Need for Social Accounting Information

In recent years great interest has been displaced by scholars in various fields about corporate social performance. No doubt economic progress is the primary goal of business enterprise, but what constitutes economic progress is going under Qualitative change. It has now become important for the companies to identify society's changing needs to ascertain Society's social priorities and to ascertain which business investment will yield economic return while satisfying these social priorities.

1. Useful to Management for Internal Purposes
2. Useful to Management for External Purposes

1. Useful to Management for Internal Purposes :

Corporate Management need social performance information to respond to a critical press to ensure that company is responsive to social challenges and the company's policies are being followed. The company because of growing legal liability needs to know in some detail what sorts of social programme it is running and what result is getting. Company management also need complete information about the effects of business operations and policies on society.

2. Useful to Management for External Purpose :

The external demand for social information is even more diverse various segments of the Company like public investors, customers, Government bodies, public interest groups, and professional organization are seeking social information to judge the performance. There has been increase of ethical investors who believe that they should avoid investing in those companies that are thought to be causing social injury of environmental damage. Bowman says that the market perception of corporate responsibility may affect the price of the stock and therefore the investor's

return. In addition to this directly effect, the price of stock will have subsequent effects on the cost of capital to the growing company and ultimately on its earnings.

Scope of social accounting :

In order to facilitate corporate accountability and analysis (here of. Brummet (1973) has identified five possible areas in which corporate social objectives may be found and each area of contribution of social, activities may be measured and reported. These areas are :

- (i) Net Income Contribution
- (ii) Human Resource Contribution
- (iii) Public Contribution
- (iv) Environmental Contribution
- (v) Product or Service Contribution.

(I) Net Income Contribution

The area recognized profit as the first important factor which justifies the existence of an organisation. The growing attention to social objectives, are not reducing the importance of income objective. There is no denying of profit Seeking as the fundamental objective of business enterprise. A corporate enterprise must earn enough to provide for the present and future costs of its survival, but this should not lead to excessive profit maximisation, rather it should limit to legitimate social profits. The deviation from purely profit seeking behaviour to socially desirable profit behaviour leads to unification of profit (income) and other (social) objectives.

The failure to plan and attain social objective will be reflected in the failure ultimately to attain the income target. Thus it can be argued that income objective is the complete test of business efficiency, both as regards financial and social goals.

(II) Human Resource Contribution

It reflects the effects of organisation activities on the human resource of the organisation These organisation activities include recruitment police and practices, training, experience building, job enrichment, wages and salary level trade Union relationship, employee's attitude congruence of organisational and individual goals, job safety, mutual trust and confidence building, transfer and promotion etc. In order to identify the contribution of human resource of the organisation, professionals have developed a technique known as Human Resource Accounting,

(III) Public Contribution

This area considers the effect of organisational activities on individuals generally outside the organisation. The creation of jobs and provisions of employment are important public contributions, as well as the development of local services which offer companies corporate expansion m the community.

(IV) Environmental Contribution

This area relates to the measurement of effect of corporate activities on the ecological balance. Corporate activity is supposed to consume irreplaceable resource and produces solid waste. This process Pollutes air and water, causes noises and spoils the-environment. This is negative external social effect. Corporate Social Objectives are the abatement of these negative external effects of industrial production and adoption of more efficient techniques to minimise the use of irreplaceable resources and the product of waste.

(V) Product or Service Contribution

This area relates to the qualitative aspect of the organizations products or services. It includes product utility, durability of product, safety, service ability as well as the welfare role of the product or service. It also includes consumer satisfaction, honest exposure in advertising, completeness and clarity of labeling and packaging.

Conceptual Framework for Social Accounting :

A conceptual framework for 'Social Accounting' and reporting is just like a constitution for it. It should be a coherent system of interrelated objectives and fundamental that can lead to consistent standards and that prescribe the nature, functions and limits of (micro) Social Accounting. Such a framework would be useful for the development of a coherent set of standard and techniques, for the resolving of new emerging political problems and for developing confidence and under-handing and confidence in social reporting and for increasing comparability among companies social report.

A conceptual framework for social Accounting does not exist at present either in professional or in academic literature.

A conceptual framework for social Accounting is intended to act as a constitution for the process of choosing techniques of measurement, evaluation and communication, of social information. The constitution specifics both objectives and fundamentals.

Belkouii provides an over view of the conceptual framework for social Accounting. At the first level, the proposed objectives identify the goals and purpose of social Accounting. At the Second level are the proposed concepts and Qualitative Characteristics of social Accounting. Finally at the third level operational-guidelines specify the techniques of measurement and evaluation for social Accounting

A CONCEPTUAL FRAMEWORK
FOR SOCIAL ACCOUNTING

First Level**1. Proposed objectives**

- (i) Measurement Objectives
- (ii) Reporting Objectives

Second Level**Fundamental Concepts and Qualitative characteristics:****1. Fundamental Concepts**

- (i) Social Transaction
- (ii) Social Overhead Concept
- (iii) Social Income
- (iv) Social Constituents
- (v) Social Equity

2. Qualitative Characteristics

- (i) Decision usefulness
- (ii) Benefits over costs
- (iii) Relevance
- (iv) Reliability
- (v) Neutrality
- (vi) Timeliness
- (vii) Understandability
- (viii) Verifiability
- (ix) Representational Faithfulness
- (x) Comparability
- (xi) Consistency
- (xii) Completeness

Third Level

Techniques of Measurement

Techniques of Evaluation

Techniques of Reporting

K.V. Ramnathan has given three objectives of Social

Accounting in exhaustive form viz.

- (i) Measurement objectives
- (ii) Reporting Objectives
- (iii) Other objectives.

First Objective

An objective of corporate social Accounting is to identify and measure the periodic net social contribution of an individual firm, which includes not only costs and benefits internalised to the firm but also those arising for externalities affecting different social segments,

Second Objective

Another objective of such type of accounting is to help determine whether an individual firm's strategies and practice which directly affect the relative resource and power status of individuals, communities, social segments and generations are consistent with widely shared social priorities on the one hand and individuals legitimate aspirations on the other.

Third Objectives

Other objective of such type of accounting is to make available in an optional manner to all social constituents relevant information of a firm's goal, policies, programmes, performance and contribution to social goals.

K. V. Ramanathan has also provided six concepts, which are necessary for social Accounting. These concepts are (i) Social Transaction (ii) Social Overheads (iii) Social Incomes (iv) Social Constituents (v) Social Equity (vi) Social Asset.

- (i) Social Transaction : It represents a firm's utilisation or delivery of socio-environment resource that affects the absolute and relative interest of a firm's various / social constituents and that is not processed through the market price.
- (ii) Social Overhead : It represents the sacrifice (benefit) to society from those, resources consumed (added) by a firm as a result of its social transaction.
- (iii) Social Income : It is the periods' net social contribution of a firm, It is computed as the algebraic sum of the firm's traditionally measured net income its aggregate social overheads and its aggregate social returns
- (iv) Social Constituents : These are the different distinct social groups with whom a firm is presumed to have a social contract.
- (v) Social Equity : It is the claim that each social constituent has in the firm.
- (vi) Social Assets : It constitutes the firm's non-market contribution to the society, which are increased by positive externalities and decreased by negative externalities.

Qualitative Characteristics

Basically information contained in corporate social report should possess certain qualitative characteristics to fulfill user's, requirements. These characteristics are intended to guide the preparers of social reports to produce the best or most useful information for managers and other users. The qualitative characteristics (reporting Standards) which have been proposed for financial accounting and reporting can also be applied to social reporting.

Financial Accounting standard board (FASB) of U.S.A. has proposed certain Qualitative characteristics (criteria) for selecting and evaluating financial accounting and reporting policies. These characteristics are equally applicable to social accounting and reporting also.

- (i) Decision Usefulness : Social responsibility accounting is concerned to some degree with decision making, this decision usefulness becomes overriding criterion for choosing among social accounting alternatives. This type of information chosen is the one that, subject to any cost consideration, appears the most useful for decision-making.
- (ii) Benefit over costs : To survive in business, the corporation will have to integrate their economic goals with social needs social costs and benefits of the corporation will have to be reported to the community at large to keep it informed and to gain its goodwill.
- (iii) Relevance : The information should be such that can make a difference in decision by helping users to make prediction about the out come of the past, present and future events or to confirm or correct prior expectations
- (iv) Reliability : The information must be such which should be free from errors and bias. It should faithfully represent what it purports to represent. Social Accounting information should be reliable to the extent that users can depend upon the information to represent the economic condition or events that it aims to represent.
- (v) Neutrality : Social Accounting information must be such that it should not favour any group.
- (vi) Timeliness : The information must be available in time otherwise it will lose its importance. Delay and extraordinary delay in providing information will defeat its purpose for the user

- (vii) **Understandability** : The social statements and reports should be such that they can be easily understand and users can also know their importance.
- (viii) **Verifiability** : By whatever method if information is measured it should be free from bias, and should represents what ever it wanted to represents.
- (ix) **Representational faithfulness** : From the social Accounting point of view, it is correspondence between the social Accounting figures and descriptions and the resources w events that those figures and descriptions represents.
- (x) **Comparability** : Social Accounting information must be such that it can be compared with other sets of economic phenomenon
- (xi) **Consistency** : The policies and procedures should be same from one period to net period. If there is a change in policies and procedure it must be given in the report.
- (xii) **Completeness** : Social Accounting information must be complete in all respects. Nothing should be hidden. It should disclose full information.

FACETS OF CORPORATE SOCIAL RESPONSIBILITY

According to the former chief Justice P. N.-Bhagawati the traditional view that the company is the property of shareholder is now an exploded myth. The ownership of the concern was identified with those who brought in capital. That was the outcome of the property minded capitalistic society in which the concept of company originate. But this view can no longer regarded as valid in the light of the changing socio-economic concepts and values. Today social scientists and thinkers regard a company as a living vital and dynamic social organism with firm and deep rooted affiliations with the rest of the community in which it functions, Now a days thinking regard to the duties and obligations of the company not only to the shareholders but also the rest of the community affected by its operators such as workers consumers and the Government representing the society. Broadly speaking a company owes social responsibilities to the following.

1. Responsibility towards the consumers
2. Responsibility towards the employees
3. Responsibility towards shareholders.
4. Responsibility towards society
5. Responsibility towards the local community
6. Responsibility towards the envihwinlent
7. Responsibility towards the creditors supplier and others
7. Responsibility towards the management education.
8. Responsibility towards Research and Development.

Now we will discuss them in detail

I. Responsibility towards the Consumers :

Now a days there is movement towards "Consumerism" consumer expect that (a) product and services of good quality should be available (b) Goods must be reasonably priced (c) Goods must be properly packed (d) Goods must be of sufficient variety (e) The sale of goods must be followed by the proper service in case of need (f) there must be proper direction or instruction of the use of goods (g) There should be fair and widely dispensed network of distributive system. (h) The management should not indulge in unfair trade practice like profiteering hoarding or creating artificial scarcity (i) The management should not misled the customer by false exaggerated and misleading advertisements.

It may be observed that the consumer satisfaction is the ultimate aim of all economic activity and consumers are the largest economic group who are affected by almost every public and private corporate decision. If the consumers are offered inferior and substandard goods, if prices are exorbitant, if drugs and food are adulterated, if the household gadgets are unsafe and if the consumer is unable to choose on an informed basis, his money is wasted, his health and safety might be endangered and this ultimately with the national interest might suffer. Therefore the corporate enterprise must realise their obligation towards their consumer and should perform them well.

2. Responsibility Towards the Employees :

According to professor Frederics Harbison " Human resources Constitute the ultimate basis for 'wealth of Nations'. Capital and Natural Resources are the passive factors of production, human being are the active agents who accumulate capital, exploit natural resources, build social and political organisation and carry forward national development clearly a country which is unable to develop the skill and knowledge of its people and to utilise them effectively in the national economy shall be unable to develop anything else.

This shows that human resources are very important for the growth of any country. Similarly they are equally important in the company form of organisation. Company must do something to improve the relations with its employees. The corporate sector must do something extra for its human resources in addition to what the industrial law of the country says. The company must start some training programme to improve the quality of its workers and give them promotions from time to time if they train themselves with the latest technological developments. Attitude of the employers is very important in an organisation. Lawrence Appley, the well-known Author in U.S.A. on Management science has said. "It is this attitude on the part of the higher staff which helps to bring out the best in the employees. Employees also be given safety and security of their job last but not the least there must be workers participation in management

3. Responsibility towards Shareholders

Responsibility towards shareholders is of prime importance, It is the duty of the Company to provide them a fair return on their investment Management should provide them full information relating to trading activities etc. If socio-economic information is available to the shareholders by the management, it will be helpful for the shareholders to take decisions. Social Accounting and reporting is needed by present and potential investors. Social Disclosure has great impact on investment decisions.

4. Responsibility towards society

No business organisation can develop in isolation. Business no doubt an economic activity, it has to develop in a social environment. In the age of 'revolution of rising expectation' it is the duty of every business that its decision and activities must meet the needs and interest of the society. It is true that it is the society's which helps business when it is flourishing & it protects, at the time of falling, so if any business wants to survive it must respond to the society's, need and give to the society what it really wants. The Sachar Committee has observed " In the environment of modern economic development, corporate society no longer function in *isolation*. If the plans of companies that are performing a social purpose in the development of the country is to be accepted, it can only be judged by the test of social responsiveness shown towards the needs of the community by the companies. No enlightened company management can remain aloof to the social problems such as unemployment, overpopulation rural development, environmental protection, including conservation of resources, control of pollution and provision of drinking water..... A profit is still a necessary part of the total picture but it is not a primary purpose Corporate sector must therefore accept the fact that although profits are indicative of sound business health, contribution to social progress is equally becoming a measure of corporate achievement. The corporate sector must accept its obligations to be socially responsible and to work for the larger benefits of the society.

5. Responsibility towards the local community

In addition to the responsibility of business to the society it has responsibility towards community also. Irresponsibility and negligence on the part of corporate sector may bring serious industrial hazards to the community, as we have seen in the case of Bhopal Gas Tragedy.

6. Responsibility towards the environment

Environmental pollution is increasing with the growth of industrialisation. Western countries have realised this problem fifty years before. In our country we have become conscious about environmental problem after Bhopal Gas Tragedy. The industries produce considerable quantum of pollution in the form of sulphurous gases, traces of carbon mono-oxide and harmful components of affluent are emitted and discharged by plant engaged in industrial products like Fertilisers, pesticides and alcohol. It is the duty of the management that they should develop certain methods for reduction in environmental pollution and minimisation of ecological imbalances. The corporate sector should be required to disclose information in the sphere of curbing industrial pollution, whether it is a water pollution or air pollution of any other form or pollution.

7. Responsibility towards competitors

Now a days there is a cutthroat competition between the traders. They adopt malpractices to malign the trade of their competitors. Management must realise that suppression of competition through unethical undesirable and illegal means is not going to lead them any where and even a single cause of mistake, if and when discovered can bring to nought the image that might have taken years to build.

8. Responsibility towards Management Education

It is the duty of the Management to share their experiences with the students of Management Education. Management should frequently attend the seminars, symposia & conferences so that they can discuss their problems with the management students & Management students can learn from their experiences. It will be helpful in the growth of business and industry.

9. Responsibility towards Research and Development

Business has a responsibility towards general public also. It can discharge its duty by developing and improving products and technology and pass its benefits to the public in the form of improved and better quality products as well as in the form of reduced prices, for doing this management should do expenditure on research and development develop new products, improving the existing products, develop new processes and improved techniques. Management feels that investment done on research and development does not yield quick returns, but they should not fear about this notion. Fundamental research can be done in Universities and other institutions but company should also conduct research in its own laboratories.

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