Accounting & Finance

This ebook is useful for students of BCA, MCA, MBA, CA, etc. It presents a balanced treatment of the theory & practical system of accounting.

Coverage Includes

- Accounting & Its Functions
- Accounting Concepts & Standards
- Accounting Information & Its Applications
- Construction & Analysis of Balance Sheet
- Construction & Analysis of Profit & Loss Account
- Construction & Analysis of Funds Flow Statement
- Understanding & Classifying Costs
- Absorption & Marginal Costing
- Cost-Volume-Profit Analysis
- Variance Analysis
- Ratio Analysis
- Leverage Analysis
- Budgeting & Budgetary Control
- Investment Appraisal Methods
- Management of Working Capital
- Managing Cash Needs
- Capital Structure
- Dividend Dicisions
- Miscellaneous Questions with solution

Accounting is often called the language of business. Its purpose is to communicate or report the results of business operations and its various aspects.

It is the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information.

Accounting: Objectives & Limitations

Q.1. Define accounting. What are its objectives and limitations?

According to American Institute of Certified Public Accountants (AICPA), "Accounting is the art of recording, classifying and summarizing 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."

American Accounting Association (AAA) has defined accounting as "the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information."

On analyzing the above definitions the following characteristics of accounting emerges:

i. Accounting is the art of recording and classifying different business transactions.
ii. The business transactions may be completely or partially of financial nature.
iii. Generally the business transactions are described in monetary terms.
iv. In accounting process, the business transactions are summarized and analyzed so as to arrive at a meaningful interpretation.
v. The analysis and interpretations thus obtained are communicated to those who are responsible to take certain decisions to determine the future course of business.

The following are the objectives of accounting:
a. To record the business transactions in a systematic manner.
b. To determine the gross profit and net profit earned by a firm during a specific period.
c. To know the financial position of a firm at the close of the financial year by way of preparing the balance sheet
d. To facilitate management control.
e. To assess the taxable income and the sales tax liability.
f. To provide requisite information to different parties, i.e., owners, creditors, employees, management, Government, investors, financial institutions, banks etc.

Accounting suffers from the following limitations:
i. Accounting information is expressed in terms of money. Non monetary events or transactions, however important, are completely omitted.

ii. Fixed assets are recorded in the accounting records at the original cost, that is, the actual amount spent on them plus all incidental charges. In this way the effect of inflation (or deflation) is not taken into consideration. The direct result of this practice is that balance sheet does not represent the true financial position of the business.

iii. Accounting information is sometimes based on estimates; estimates are often inaccurate.

iv. Accounting information cannot be used as the only test of managerial performance on the basis of more profits. Profit for a period of one year can readily be manipulated by omitting such costs as advertisement, research and development, depreciation and so on.

v. Accounting information is not neutral or unbiased. Accountants calculate income as excess of revenues over expenses. But they consider only selected revenues and expenses. They do not, for example, include, cost of such items as water or air pollution, employee's injuries, etc.

vi. Accounting like any other discipline has to follow certain principles, which in certain cases are contradictory. For example current assets (e.g., stock of goods) are valued on the basis of cost or market price whichever is less following the principle of conservatism. Accordingly the current assets may be valued on cost basis in some year and at market price in another year. In this manner, the rule of consistency is not followed regularly.

Functions of Accounting

Q. What are the various functions of Accounting?

Various Functions of Accounting are:

a. Recording: Accounting records business transactions in terms of money. It is essentially concerned with ensuring that all business transactions of financial nature are properly recorded. Recording is done in journal, which is further subdivided into subsidiary books from the point of view of convenience.

b. Classifying: Accounting also facilitates classification of all business transactions recorded in journal. Items of similar nature are classified under appropriate heads. The work of classification is done in a book called the ledger.

c. Summarizing: Accounting summarizes the classified information. It is done in a manner, which is useful to the internal and external users. Internal users interested in these informations are the persons who manage the business. External users of information are the investors, creditors, tax authorities, labor unions, trade associations, shareholders, etc.

d. Interpreting: It implies analyzing and interpreting the financial data embodied in final accounts. Interpretation of the data helps the management, outsiders and shareholders in decision making.

Different Systems of Accounting

Q. Explain the different systems of accounting.

The following are the basic systems of recording business transactions:

i. Cash Basis Accounting: According to this system, only actual cash receipts and payments are recorded in the books. The credit transactions are not recorded at all, till actual cash is received or paid. Thus, if purchases are made in the year 2002 on credit and payment for purchases is made in the year 2003, such purchases shall be considered to be an expense of the year 2003 and shall not be recorded in the year 2002. This system of accounting is mostly followed by non-trading organizations, professionals like lawyers, doctors, chartered accountants, etc.

ii. Mercantile or Accrual System: According to this system, all the business transactions pertaining to the specific period, whether of cash or credit nature, are recorded in the books. This system of accounting is based on accrual concept, which states that revenue is recognized when it is earned and expense is recognized when obligation of payment arises. Actual movement of cash is irrelevant. Mercantile system of accounting is widely followed by the industrial and commercial undertakings because it takes into account the effects of all transactions already entered into.

iii. Mixed System: Mixed system is modified form of pure-cash-basis accounting. Because of the fact that pure cash basis would result in balance sheet and income statement with limited use, it necessitates the need of mixed accounting in which some items (especially sales and period costs are treated on cash basis and some items (especially product costs and long-lived assets) are treated on accrual basis.

Pure cash basis approach would change the cost of acquisition of inventories from the profit of that year in which the acquisition costs are paid rather than in the year in which inventories are sold. Similarly cost of acquisition of fixed assets would reduce the profits when paid in cash rather than in later periods when these long-lived items are used, thus misleading the results of financial operation.

Emerging Role of Accounting

Q. Explain briefly the meaning of

Financial Accounting (Dec. 99, Jan. 01)
Management Accounting (June 00)
Social Responsibility Accounting (Dec. 00, June 01)
Human Resource Accounting (June 03)

Financial Accounting (Jan 01)

Financial or traditional accounting consists of the classification, recording, and analysis of the transactions of a business in a subjective manner according to the nature of expenditure so as to enable the presentation at periodic intervals, of statements of profit or loss of the business and, on a specified date, of its financial state of affairs. The day-to-day transactions journalized or recorded in subsidiary books are posted in the various ledgers and at the end of the accounting period, a Profit and Loss Account and a Balance Sheet are prepared. The emphasis is on the ascertainment and exhibition of the profits earned or losses incurred by the business rather than on the aspects of planning and control and decision making.

Financial accounting safeguards the interests of the business and its proprietors and other connected with it by providing suitable accounts and information to various parties, such as the shareholders or partners, present and prospective creditors and the Government. The accounts are kept in a manner so as to meet the provisions of the Companies Act and to present correct figures to income tax, excise and other authorities. These accounts show how gainfully the resources of the business were employed.

Management Accounting (June 00)

Management accounting includes all those accounting services by means of which assistance is rendered to the management at all levels, in formulation of policy, fixation of plans, control of their execution, and measurement of performance. Management accounting is primarily concerned with the supply of information which is useful to the management in decision making for the efficient running of the business and thus, in maximizing profit. Management account employs various techniques, which include standard costing, budgetary control, marginal costing, break-even and cost-volume-profit analysis, uniform costing and inter-firm comparison, ratio accounting, internal audit, and capital project assessment and control.

Social Responsibility Accounting (Dec. 00, June 01)

Social responsibility accounting is a new phase in the development of accounting and owes its birth to increasing social awareness, which has been particularly noticeable over the last two decades or so. Social responsibility accounting widens the scope of accounting by considering the social effects of business decisions, in addition to the economic effects. Several social scientists, statesmen and social workers all over the world have been drawing the attention of their governments and the people in their countries to the dangers posed to environment and ecology by the unbridled industrial growth. The role of business in society is increasingly coming under greater scrutiny. The management is being held responsible not only for efficient conduct of business as expressed in profitability, but also for what it contributes to social well being and progress. There is a growing feeling that the concepts of growth and profit as measured in traditional balance sheets and income statements are too narrow to reflect the social responsibility aspects of a business.

Human Resource Accounting (June 03)

It is another new field of accounting which seeks to report and emphasize the importance of human resources in a company's earnings. It is based on the fact that the only real long lasting asset which an organization possesses is the quality of the people working in it.

This system of accounting is concerned with " the process of identifying and measuring data about human resources and communicating this information to interested parties."

Q. How does management Accounting differs from Financial Accounting? Explain briefly, how management accounting helps the management of a company in making its decisions. (Dec. 02)

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Management accounting includes all those accounting services by means of which assistance is rendered to the management at all levels, in formulation of policy fixation of plans and control of their execution, and measurement of performance. Management accounting is primarily concerned with the supply of information which is useful to the management in decision making for the efficient running of the business and thus, in maximizing profit. Management account employs various techniques, which include standard costing, budgetary control, marginal costing, break-even and cost-volume-profit analysis, uniform costing and inter-firm comparison, ratio accounting, internal audit, and capital project assessment and control.

Difference

Financial accounting depicts the past position of the concern, while management accounting stresses at future.

Financial accounting keeps a record of very large number of daily business transactions and prepares various financial statements according to accounting principles and standards. In management accounting there is no such compulsion. It lays emphasis on analysis and standards.

Management accounting provides data to managers to help them in making decisions about the future. To the contrary, financial accounting aims at meeting the requirements of outside parties who have financial stake in the business.

Financial accounting is mandatory for all joint stock companies and business organizations but this is not the case with management accounting.

Interested Groups

Q. State the group of persons having an interest in a business organization and examine the nature of their information head? (Dec. 99)

There are various parties interested in the financial statements. Accounting information is useful to various internal & external users listed below:

Shareholders:
Since shareholders have invested in the company so they are interested in the financial statements.

Creditors:
Creditors may be short-term or long-term. The main concern of the creditors is focused on the credit worthiness of the firm and its ability to meet its financial obligations. They are therefore concerned with the liquidity of the firm, its profitability and financial soundness.

Management:
Management requires accounting information for planning, organizing, and control purposes. The emphasis on efficient & effective management of organizations has considerably extended the demand for accounting information.

Employees:
The importance of harmonious industrial relations between management & employees cannot be over-emphasized. The employees have a stake in the outcomes of several managerial decisions. Greater emphasis on industrial democracy through employee participation in management decisions has important implication for the supply information to employees. Matters like settlement of wages, bonus, & profit sharing rest on adequate disclosure of relevant facts.

Government:
Government uses financial information for compiling statistics concerning calculation of profitability, taxes, computation of national income, and determination of the industrial growth.

Stock Exchanges:
Several stock exchanges also require accounting information for listing of securities.

Consumers & Others:
Consumer organizations, media, welfare organizations and public at large are also interested in condensed accounting information in order to appraise the efficiency and social role of the enterprises in different sectors of the economy.

Role of Accountants

Q. Discuss the role of accountants in modern business organization. (June 00)
Role of Accountants in Modern Business Organization:

Accounting is an age-old profession. In old days of accounting, the main function of an accountant was to maintain the records of the business. However over the years, the role of an accountant has undergone a sea change. With the inception of joint stock company form of an organization, the profession of accountancy has come to be recognized as one of the lucrative professions. Accountants can be broadly divided into two categories namely, Accountants in public practice and Accountants in employment. Accountants in public practice (practicing chartered accountants) are members of the Institutes of Chartered Accountants of India. The accountant renders valuable service to the society in the following manner:

1.**Writing up Accounts for Preparing Financial Statements:**
Professional accountants offer services for writing up accounts and preparing financial statements. By maintaining proper books of accounts and records he assists management to a great extent in the field of planning, decision-making and controlling. A systematic record also enables the business to compare one year's results with those of other years.

2.**Audit of Accounts:**
Conducting of audit is one of the most important functions of a professional accountant where his specialized training, skills and judgement are most often called into play. Audit satisfies the users of financial statements that the accounting information contained in these statements is true and reliable and that accounts have been prepared in accordance with the accounting standards. It, thus, adds credibility to financial statements prepared by the business. He also points out the shortcoming and suggests ways to overcome them.

3. **Role as Management Accountant:**
A management accountant helps the management in planning and control of organizational activities and their performance evaluation.

4. **Help to government, Revenue Department and Tax Payer:**
Chartered accountant plays an important role in ensuring that the Government gets its proper share of taxes and at the same time the tax payer is not exploited. Chartered accountant is instrumental in preparing the financial statements of the enterprise. He also prepares the returns for tax purposes. He also appears before the tax authorities on behalf of the taxpayer. He also does the work of certification of documents in many cases.

5. **Role as Cost Accountant:**
As a cost accountant, he maintains the costing records and ascertains the cost of product or service. He provides costing information introduces cost control and cost reduction methods and assists the management in fixing appropriate selling prices.

6. **Role in Merger, Liquidation, etc:**

The services or advice of chartered accountants are frequently sought in the formation, merger or liquidation of limited companies. They are called upon to undertake investigation for achieving greater efficiency in management and find out the reasons for increase of decrease in profits. They act as executors and trustees under a will or trust deed to carry out the administration of the estate or settlements.

Accounting Personnel

Q. Write a short note on Finance Officer. (Dec. 01).

Finance is the life blood of business. Procuring financial resources and their judicious utilization are the two important activities of financial management which is a specialized function. The finance manager has to strike a balance between the current needs of the enterprise for cash and the needs of the shareholders for adequate return. The financial management of a large company is usually the responsibility of the finance director who may be in place of or in addition to the controller. Often finance manager and controller are inter-changeable terms and only one of these two positions may be found in a company. The finance manager is also concerned with implementing the financial policy of the board of directors, managing liquidity, preparation of budgets, administration of budgetary control system, managing profitability, etc.

Accounting Concepts and standards

In this chapter, we will discuss the rules & conventions of accounting. The rules and conventions of accounting are commonly referred to as the conceptual framework of accounting. As with any discipline or body of knowledge, some underlying theoretical structure is required if a logical and useful set of practices and procedures are to be developed for reaching the goals of the profession and for expanding knowledge in that field. Such a body of principles is needed to help answer new questions that arise. Accounting theory may be defined as logical reasoning in the form of a set of broad principles that

- Provide a general frame of reference by which accounting practice can be evaluated.

- Guide the development of new practices & procedures.

- Provide a coherent set of logical principles that form the general frame of reference for the evaluation and development of sound accounting practices.

Basic Accounting Concepts

Q. What do you mean by basic accounting concepts?

Accounting has come to present status after a period of several hundred years. During this period certain accounting assumptions, concepts and conventions have emerged. Accountants universally in the recording, classification, summarization and reporting of the transactions follow these. Accounting assumptions, concepts and conventions are called Generally Accepted Accounting Principles (GAAP) since they have been commonly accepted by professional accounting world as general guidelines for preparing financial statements and reports. Thus accounting principles are rules of action adopted by accountants.

Accounting principles are man-made. Unlike the principles of physical and natural sciences, accounting principles are not eternal truths. They have been evolved over the years keeping in view their relevance, objectivity and feasibility. Accounting Standard Board (ASB) of the Institute of Chartered Accountants of India makes accounting rules in India. Knowledge of accounting concepts facilitates the learning of accounting, the language of business, by users of accounting information. The users of accounting information include shareholders, investors, lenders, suppliers of goods and services (creditors), customers, employees, government and its agencies and public at large.

Q. List the basic accounting concepts.

The Institute of Chartered Accountants of India in its Accounting Standard-I (AS-I) has stated that going concern, accrual and consistency are fundamental accounting assumptions. For the sake of convenience all accounting concepts are discussed under two headings:

- Basic accounting concepts
- Accounting concepts related to income measurement

Basic Accounting Concepts are:

- Entity Concept
- Money Measurement Concept
- Going Concern Concept
- Cost Concept
- Dual Aspect Concept
- Full Disclosure Concept
- Objectivity Concept
- Accrual Concept

Accounting concepts related to income measurement are:

- The Time Period Concept (Periodicity Concept)
- The Revenue Recognition (Realisation) Concept
- The Matching Concept
- The Materiality Concept
- The Consistency Concept
- The Conservatism (Prudence) Concept

Basic Accounting Concepts: Details

Q. Explain the following Basic accounting concepts:

- Entity Concept (Dec. 02)
- Money Measurement Concept
- Going Concern Concept (June 02, Dec. 01)
- Cost Concept
- Dual Aspect Concept
- Full Disclosure Concept
- Objectivity Concept
- Accrual Concept (Dec.00, June 01)

Entity Concept (Dec. 02)

In accounting, the entity of business is considered separate from the existence of its owners. Accounts are kept for the entity as distinct from owners. Thus, money invested by the proprietor by way of capital is considered to be the liability of the business to the proprietor. If proprietor withdraws some cash or goods, they are treated as drawings but not as business expense. Capital is reduced by the amount of drawings. The principle of separate entity is quite visible in the case of corporate bodies since a company is a legal entity separate from the shareholders who own it. In case of a corporate body the liability of the shareholders is limited to the extent of the value of shares held by them. But in case of non-corporate bodies the owners or partners remain legally liable for the debts of the business even after its closure. Their private property can be sold to discharge the liability of the firm.

Money Measurement Concept

In accounting, a record is made only of those facts or transactions that can be expressed in monetary terms. It provides a common yardstick, i.e., money for measuring, recording and summarizing the transaction. Events, which cannot be expressed in money terms, do not find a place in account books. For example, salary paid to manager is recorded in account books but his competence, which cannot be expressed in monetary terms, is not recorded in the books. The application of money measurement concept makes accounting data and information relevant, simple, understandable, homogeneous and comparable. The main advantage of money measurement concept is that even a layman is able to understand and appreciate the things stated in terms of money. However, the concept suffers from the following flaws:

a. Money does not have a constant value. The value of money changes because of inflation or deflation in the country.

b. All business assets cannot be measured in money terms. It is very difficult to calculate the value of goodwill or measure the competency or morale of employees.

Going Concern Concept (June 02, Dec. 01)

This concept assumes that the business will exist for certain foreseeable future with the specified goal or for specified duration. Thus recording and valuation of long-term assets and liabilities are based on this assumption. Fixed assets are recorded on historical costs and written down over the expected life of the assets. Similarly long-term liabilities, i.e., debentures, preference shares, long-term loans are raised and their terms of repayment are settled on this assumption.

The going concern concept is the backbone of accounting and is based on the following assumptions:

- Business has an indefinite life.
- Assets are depreciated on the basis of their expected life without caring for their current values.
- In case of innovations or new inventions, their effect is measured in financial terms and assets are depreciated to allow for such innovations or inventions.

However, if it is certain that a particular venture will exist only for a limited period, the accounting records will be kept accordingly. Further, if in the long run a business decides to revalue the assets and transfer the surplus or deficit to capital reserve, it will not be taken as violation of the going concern concept. Here revaluation is on a permanent basis to reflect current values of assets.
Accounting Standard (AS)-l states "the enterprise is normally viewed as a going concern, that is, as continuing in operation for the foreseeable future. It is assumed that the enterprise has neither the intention nor the necessity of liquidation or of curtailing materially the scale of operations." Continuity of activity is to be true of all types of business enterprises. The assumption does not imply the permanent existence of an enterprise. It simply assumes stability and continuity for a period of time long enough to carry out present plans, contracts and commitments.

Cost Concept

According to this concept, all transactions and events are recorded in the book" of account at the actual price involved. This price is called cost. All assets are carried in the books of accounts from year to year at their acquisition cost (also called historical cost) irrespective of any change in their market value. Acquisition cost is considered highly objective, reliable, definite and free from bias. Thus when a machine is purchased for Rs. 5 lakhs, transportation expenses are Rs. 20,000, installation expenses are Rs. 10,000, the machine is valued at Rs. 5,30,000. This is the historical cost of machine.

However, the cost concept creates difficulties in its application in the following situations:

(a) When due to price rise, the prices of all commodities go up substantially, the financial position of a firm depicted on cost concept basis does not reflect true picture.

(b) Financial statements of two or more firms set up at different points of time prepared on historical cost basis are not comparable due to changes in prices.

(c) Depreciation is computed on historical cost. This understates depreciation when current value of an asset is very high. So it becomes necessary to revalue the assets.

(d) This concept implies recording of all assets for which costs have been incurred but the assets like managerial competence, reputation or goodwill of the firm acquired over a period of time are not recorded.

(e) The exception to this concept of valuing assets at cost irrespective of its market value is the valuation of inventories. According to AS-2, inventories should be valued at cost or market price whichever is lower.

In spite of the limitations, cost concept is still considered highly objective and free from bias.

Dual Aspect Concept

Every transaction entered into by a firm has two aspects, viz., debit and credit. Debit represents creation of or addition to an asset or an expense or the reduction or elimination of a liability. Credit means reduction or elimination of an asset or an expense or the creation of or addition of a liability. Therefore, according to dual aspect concept, at any time, the total assets of a business are equal to its total liabilities.

In the equation form:

Assets = Capital + Liabilities

Assets denote the resources owned by a business while the term liability refers to external claim. And capital is the claim of the owners against the assets of the business.
The system of accounting, which records both the aspects of a transaction ever, is based on Double Entry System of bookkeeping.

Full Disclosure Concept

Accounting records are meant for the use of owners, investors, lenders, creditors, bankers, employees and Government for various purposes. They must be prepared honestly and all material information should be disclosed for the benefit of its users. An attempt should be made to make the information revealed more meaningful to all those who are entitled to receive it. In case of a holding company, accounts of subsidiary companies should be attached with those of the holding company. Sufficient annexures should follow the income statement and the balance sheet to make the full disclosure. The Companies Act 1956 has taken sufficient precautions in this regard. This is in keeping with the latest trend of financial statements as a means of conveying and not concealing information.

The Accounting Standard-l (AS-I) issued by the Institute of Chartered Accountants of India mentions about 'Disclosure of Accounting Policies' in paragraph 24-27 as follows:

24. All significant accounting policies adopted in the preparation and presentation of financial statements should be disclosed.

25. The disclosure of the significant accounting policies as such should form part of the financial statements and the significant accounting policies should normally be disclosed at one place.

26. Any change in the accounting policies which has a material effect in the current period which is reasonably expected to have a material effect in later period should be disclosed. In the case of a change in accounting policies which has a material effect in the current period, the amount by which any item in the financial statements is affected by each change should also be disclosed to the extent ascertainable. Where such account is not ascertainable, wholly or in part, the fact should be indicated.

27. If the fundamental accounting assumptions, viz., going concern, consistency and accrual, are followed in financial statements, specific disclosure is not required. If a fundamental accounting assumption is not followed, the fact should be disclosed.

Objectivity Concept

This concept implies that all accounting records should be supported by proper documents, e.g., invoices, cash memos, correspondence, agreements etc. These documents supply the information on the basis of which entries are made in the books of account. The accounting entries are based on objectively verifiable evidence.

Accrual Concept (Dec.00, June 01)

This assumption is core of mercantile system of accounting. According to this concept revenue and costs are recognized as they are earned or incurred (and not as money is received or paid), The accrual concept result in the recognition and recording of revenue transaction when the right to receive revenue arises which can be in cash or in kind, e.g., the credit sales of Rs. 50,000 will be included in the sales but goods sent on approval for sale will not be treated as sales, because of the uncertainty involved in the transaction. Similarly, while ascertaining the profit or loss, not only those expenses, which have been paid in cash, should be considered, but also expenses that have accrued but not paid should be taken into account. The application of accrual concept helps in depiction of time financial position of the enterprise as the costs and revenue is recognized when they are incurred.

Accounting Concepts Related to Income Measurement

One important objective of accounting is to ascertain the results of operations of an organisation for a period of time. In case of profit oriented organisation, the income statement summarises the results of its operations for a given period of time, generally a year. The going concern concept of accounting assumes that the life of a business is perpetual. Such being the case, owners, management and other interested parties cannot wait indefinitely to know how much income has been earned by the business. They would like to know at least on a periodical basis the results of operations of the business. This brings into play certain concepts, which are related to income measurement. These are discussed below:

1. The Time Period Concept (Periodicity Concept)

This concept indicates that the profitability of a business is to be measured periodically. The period for which income is measured is called the accounting period. For the purpose of external reporting, the accounting period is generally one year. Thus, accounting profit is the result of completed transactions during the accounting period. For income tax purposes, a business has compulsorily to adopt financial year beginning on 1st April in any calendar year and ending on 31st March in the next calendar year as its accounting year. However, for internal reporting the profitability report can be prepared monthly, quarterly or half yearly depending on the nature of project to facilitate better control and evaluation of performance.

2. The Revenue Recognition (Realisation) Concept

According to this concept, revenue is considered as being earned on the date on which it is realised. Revenue is thus recognised in the Profit and Loss Account of an enterprise when a sale is made or service is rendered to customers. According to Accounting Standard-9 (AS-9) in case of sale of goods, revenue will be recognised when the seller of goods has transferred to the buyer the property in goods and no significant uncertainty exists regarding the sales price. In a transaction involving the rendering of services, revenue should be recognised when services have been rendered to the satisfaction of the customer and when no significant uncertainty exists regarding the amount of consideration. According to Anthony and Reece, "The conservatism concept suggests the period when revenue should be recognised. Another concept, the realisation concept indicates the amount of revenue that should be recognised from a given sale".

3. The Matching Concept (Jan. 01, June 03)

Deducting expenses from revenues arrives at accounting profit. However, accountants carry forward expenses until they can be identified with the revenue of particular accounting year and carry forward receipts until they can be regarded as revenue of the particular year. Thus, this principle is very important for correct determination of profit, which is also a measure of performance. All expenses that generate revenue in the current accounting period are recognised as expenses of the current period. Cost of goods sold and operating expenses incurred during the current period are recognised as expenses of the current period and will be matched with the revenue of the current period. Incomes received in advance or relating to earlier periods must not be taken into account. Similarly, expenses paid in advance are also to be ignored while computing the income of current accounting period.

4. The Materiality Concept

According to this concept, financial statements should disclose all material items, i.e., items the knowledge of which might influence the decisions of the user of the financial statements. What is material may, however, differ from concern to concern and year to year. Kohler has defined materiality as 'the characteristic attaching to a statement, fact or item whereby its disclosure or the method of giving it expression would be likely to influence the judgement of a reasonable person.' Thus when the event is material, it should be disclosed. But if the item or event is immaterial, it may not be disclosed. It is on the basis of materiality concept that items of stationery are considered to have been used up either at the time of purchase or at the time of their issue from stores.

5. The Consistency Concept

The Generally Accepted Accounting Principles (GAAP) permit more than one method of describing identical operating situations. For example, a firm may have different methods of providing depreciation on fixed assets or inventory valuation or making provision for likely bad debts, which are permissible under the GAAP. As a result, the firm will report different amounts of income in different years for the same accounting transactions. Inconsistency will make the two financial statements incomparable. It is for this reason that the consistency principle requires that the basis of income measurement and preparation of financial statements should remain consistent for intra-firm and inter-firm comparison. Accounting Standard-I (AS-I) also states that it is assumed that accounting policies are consistent from one period to another. Thus, a firm should follow same accounting methods and procedures from year to year. However, it is permitted to change them if it has a sound reason to do so. But the effect of such a change must be disclosed in the financial statements of the year in which change took place to enable the users to be aware of the lack of consistency.

6. The Conservatism (Prudence) Concept

As the term suggests its traditional approach of playing safe or being cautious in recognising all the possible losses but ignoring all probable profits. This is also known as prudence concept implying the common and accepted behaviour of accounting or providing for future losses. Though this approach leads to creation of secret reserves and understatement of income; it also of safeguards the interest of outsiders by preventing the management from recognising unrealised, profits and providing for all future losses.

There are few instances, which illustrate the acceptance and adherence of this concept.

1. Inventories are valued at lower of cost or market price.

2. Providing for doubtful debts and discount allowed to debtors but ignoring the probable discount received from creditor till the time final payments are made.

3. All the fixed assets are valued on historical costs irrespective of their market price except in the case of revaluation of business.

4. Preference of written down value method over straight-line method of depreciation, since the earlier one, provides for more depreciation in the initial years of use.

5. Valuing Joint Life Insurance Policy at its surrender value irrespective of amount of instalments paid.

Accounting Standards

Q. Discuss the importance of setting accounting standards. (June 02)

The information revealed by the published financial statements is of considerable importance to shareholders, creditors, and other interested parties. Hence, it is the responsibility of the accounting profession to ensure that the required information is properly presented. Therefore it is necessary that certain standards should be followed for drawing up the financial statements so that there is the minimum possible ambiguity and uncertainty about the information contained in them.
The International Accounting Standards Committee (IASC) has undertaken this task of drawing up the standards

(i) The Growth in International Investment: Investors in international capital markets make decision based on published accounting which are based on accounting policies and which again vary from country to country The International Accounting Statements will help investors to make more efficient decisions.

(ii) The Increasing Prominence of Multinational Enterprises: Such enterprises render accounts for the countries in which their shareholders reside and in local country in which they operate. Accounting standards will help to avoid confusion

(iii) The Growth in the Number of Accounting Standard Setting Bodies: It is hoped that the IASC can harmonies these separate rule making efforts. The objective of the IASC is to formulate and publish in the public interest standards to be observed in the presentation of audited financial statements and to promote their world-wide acceptance and observance.

: **Following is the importance of accounting standards**

- Standards reduce or eliminate all together confusing variations in the accounting treatment used to prepare financial statements.

- With different companies following same standards, comparison of their financial policies and financial results becomes easier.

- Accounting standards take care of valuing inventories, contingencies, construction contracts, fixed costs, etc. They cover all aspects of financial activities of company.

- The standards help the investors for taking decision on investment.

- Setting standards is useful to both the company & and the investor.

Q. How many Indian accounting standards are issued so far? Explain their significance and importance in Accounting. (Jan. 01)

The Accounting Standard Board has so far issued twenty-two definite standards. They are listed below:

AS-1 Disclosure of Accounting Policies
AS-2 (Revised) Valuation of Inventories
AS-3 (Revised) Changes in Financial Position
AS-4 (Revised) Contingencies and Events Occurring After the Balance Sheet.
AS-5 (Revised) Prior Period and Extraordinary Items and Changes in Accounting Policies
AS-6 (Revised) Depreciation Accounting
AS-7 Accounting for Constructions Costs
AS-8 Accounting for Research & Development
AS-9 Revenue Recognition
AS-10 Accounting for Fixed Costs
AS-11 (Revised) Accounting for the effect of Changes in Foreign Exchange Rates
AS-12 Accounting for Government Grants

AS-13 Accounting for Investments
AS-14 Accounting for Amalgamation
AS-15 Accounting for Retirement benefits in the Financial Statements of Employers
AS-16 Borrowers Costs
AS-17 Segment Reporting
AS-18 Related Party Disclosures
AS-19 Leases
AS-20 Earnings per share
AS-21 Consolidated Financial Statements
AS-22 Accounting for Taxes on Income

Significance & Importance

Please refer to the previous question for details.

ACCOUNTING INFORMATION AND ITS APPLICATIONS

Introduction:

Accounting was developed as a system for reporting information to the owners including shareholders and other investors of the business. In the process of its evolution, accounting has branched off into two distinct directions- financial accounting & the second as managerial accounting. The financial accounting deals with information processing for external uses and managerial accounting deals with information processing for internal uses.

Accounting information generally encompass information processing for both internal & external uses.

Purposes of Accounting Information

Q. What are the purposes of accounting information?

Score Keeping:

The score-keeping function is one the primary purposes of accounting information. It basically deals with the financial health of the enterprise. In other words, it answers: How are we doing? Good, bad or indifferent? Though it appears to be a simple question, a moment's reflection will show that it is not that simple. It involves answering questions such as: What is doing good? What is doing bad? Is profit earned good? If so, how much? Is it that profit alone is not sufficient? Thus we can go on increasing the string of questions intending to further clarify the basic question. Thus, score keeping has two aspects, one is that of keeping record of actual data on performance – a constant process of measurement and valuation. The other aspect is concerned with putting the data in relation to predetermined standards. In order to answer the question whether the performance is good, bad or indifferent we have to have a constant process of comparison against some norms, standard or benchmarks. This is achieved by preparing a series or reports based on comparison of actual data with the planned data.

Attention Directing

Attention directing is nothing but the process of giving a signal to the user of accounting information about the need to take a decision. As such the accounting information supplied arouses the user's attention to take decision. For example, a report from an accountant comparing the actual performance data against budget data is a score keeping record. In the hands of a decision-maker it is an attention directing information. This would enable him to immediately focus his attention on the deviations or variances from the budgets or the plants. A whole series of actions will be triggered by this, namely, evaluation or reasons for the deviations, remedial actions to be taken, modifications in the feedback for future and so on.

Problem Solving:

The problem solving function of accounting information involves provisions of such information, which enables the manager to find solutions to the problems. There are many problems, which accounting information could highlight and provide for their possible solutions, such as 'make or buy decisions' with respect to components, parts or products, 'continue or drop decisions' with respect to product lines, 'leasing or acquisition decisions' with respect to asserts etc. problem solving is therefore an important purpose of accounting information system.

Uses of Earnings Information

Q. Explain uses of earnings information.

1. Accomplishments:

Profit is an important indicator of the accomplishment of business. Other things remaining same, higher the profits greater are the accomplishments.

2. Appropriation Decision:

An important question with which owners of a business are often confronted is How much money can be withdrawn without impairing its current level of operations? This question in fact is concerned with appropriation decision. A prudent management would not only like to maintain the capital or the present capability of the enterprise intact but would also plan for future growth. The maximum amount that the owners can withdraw from business for their personal expenses should be limited to the amount of earnings, which remain after making good all the resources that have been used in the process of generating those earnings.

3. Problem Identification Using Earning Data:

From the earnings data several problem areas can be identified. This is best done by computing ratios i.e., by examining the relationship of one item of earnings statement with another item. This will be taken up in detail in a subsequent unit. At this stage it may only be stated that the lower earnings my be on account of excessive cost of inputs, excessive expenditure on overheads or low margin of profit on sales of excessive pilling of inventories or other unanticipated losses.

4. Determining the Market Value of a Firm:

The economic value of the firm is determined by the size and reliability of the stream of earnings (cash flow) produced by the business.

Balance Sheet

Q. What is a Balance Sheet? What are the objectives of preparing Balance Sheet? Explain its characteristics.

Ans. After ascertaining the profit or loss of the business, the businessman wants to know the financial position of his business. For this purpose he prepares a statement of Assets and Liabilities, which is called Balance Sheet. It is prepared on a specified date because the figure shown in the Balance Sheet is true on that date only. The totals of the Assets and Liabilities should be equal. If it is not so, it means that there is some error.

The Committee on Terminology of American Institute of Certified Public Accountants has defined the balance sheet as, "a list of balances in the assets and liability accounts. This list depicts the position of assets and liabilities of a specific business at a specific point of time."

The following are the objectives of preparing a balance sheet:

1. **Principal Objective:**

The main purpose of preparing balance sheet is to know the financial position of the business at a particular date.

2. Subsidiary Objectives:

Though the main aim is to know the exact financial position of the firm at a particular date, yet it serves other purpose as well.

- It gives information about the actual and real owner’s equity. Though the capital of the owner indicates owner’s equity, yet some other liabilities are to be accounted for against it also.

- It helps the firm to make provisions against possible future losses. A provision is made in the form of the Reserves.

The Balance Sheet as distinct from other financial statements has the following characteristics:

1. It is a statement and not an account. Although balance sheet is a part of the final accounts and prepared with the help of accounts, yet it is not an account but a statement.

2. It is always prepared on a particular date, and thus shows the position at that date and not for a period.

3. It has no debit side and credit side. Nor the words 'To' and 'By' are used before the names of the accounts shown therein. The headings are Liabilities and Assets.

4. It shows the financial position of the business concern.

5. It shows what the firm owes to others and also what others owe to the firm.

6. The totals of Liabilities and Assets always are equal.

Uses of balance Sheet

Q. Write a short note on uses of Balance Sheet. (Jan. 01)

The balance sheet reflects the financial position of the enterprise. It provides useful information to various users. The balance sheet is described as a snapshot of the financial position of a business entity. The various groups interested in the company can draw useful inferences from an analysis of the information contained in the balance sheet. The balance sheet is also called the position statement.

- It shows the financial position of the business concern.

- It shows what the firm owes to others and also what others owe to the firm.

- It shows the nature and value of the assets.

- It also reflects the liquidity of a firm.

CONSTRUCTION AND ANALYSIS OF BALANACE SHEET

Introduction:

The main objective of accounting is to convey information. This objective is achieved by different accounting reports prepared by an entity. One of the most important reports is the Balance Sheet.
Balance Sheet is concerned with reporting the financial position of an entity at a particular point in time. The balance sheet shows the assets and liabilities classified and arranged in a specific manner.

Balance Sheet

Q. What is a Balance Sheet and what information does it convey to an outsider? (June 00)

The balance sheet is a statement, which shows the financial position of a business on a particular date. It is a statement of balances of all the accounts real and personal, debit balances of all such accounts represent assets and credit balances represent the liabilities. Thus, balance sheet shows the assets and liabilities grouped properly classified and arranged in a specific manner.

The following are the objectives of preparing a balance sheet:

1. Principal Objective:

The main purpose of preparing balance sheet is to know the financial position of the business at a particular date.

2. Subsidiary Objectives:

Though the main aim is to know the exact financial position of the firm at a particular date, yet it serves other purpose as well.

- It gives information about the actual and real owner's equity. Though the capital of the owner indicates owner's equity, yet some other liabilities are to be accounted for against it also.

- It helps the firm to make provisions against possible future losses. A provision is made in the form of the Reserves.

Q. What information does it convey to an outsider?

Balance sheet is prepared with a view to measure the true financial position of a business concern at a particular point in time. It shows the financial position of a business in a systematic form. It is a screenshot of the financial position of the business. At one glance, the position of the business, at a particular point of time, can be understood.

The various groups interested in the company can draw useful inferences from an analysis of the information contained in the balance sheet.

Shareholders usually have twin interests, an interest in receiving a regular income and an interest in the appreciation of their investment in shares. Investment decisions of the prospective investors and dis-investment decisions of the existing investors are influenced by the composition of assets and liabilities shown in the balance sheet.

Similarly, other interested parties like regulatory and developmental agencies of the government, consumer, and welfare organizations can derive useful conclusions from a study of the balance sheet about the working of the corporate sector and its contribution to the national economy.

Classification of Items

Q. Explain the meaning of:

- Owner's Equity (June 98, June 99, June 00)
- Assets (June 99)
- Fixed Assets (June 01)
- Accrued Liabilities (June 98)
- Contingent Liability (Dec. 99, Dec.00)
- Accounts Receivables (June 99)

- **Owner's Equity (June 98, June 99, June 00)**

Owner's Equity is the residual interest in the assets of the enterprise. Therefore the owner's equity section of the balance sheet shows the amount the owner have invested in the entity. However, the terminology 'owner's equity' varies with different forms of organization depending upon whether the enterprise is a joint stock company or sole proprietorship/partnership concern.

Sole proprietorship/partnership concern:
The ownership equity in a sole proprietorship or partnership is usually reported in the balance sheet as a single amount for each owner rather than distinction between the owner's initial investment and the accumulated earnings retained in the business.

Joint Stock Company:
In the case of joint stock companies, according to the legal requirements, owners' equity is divided into two main categories. The first category called share capital or contributed capital. It is the amount that owners have invested directly in the business. The second category of owners' equity is called retained earnings.

In the other words Owners' equity is the claim against the assets of a business entity. It could be expressed total assets of an entity less claims of outsiders or liabilities.

- **Assets (June 99)**
-

"The entire property of all kinds possessed by or owing to a person or organisation is called assets". "Assets are valuable resources owned by a business and acquired at a measurable money cost".

They may be:

a. Fixed Assets:
These are those assets, which are acquired for relatively long periods for carrying on the business of the enterprise. Such assets are not meant for resale. For example, Land and Building, Plant and Machinery etc.

b. Current Assets:
These assets are also termed as 'Floating or Circulating Assets'. Such assets are acquired with the intention of converting them into their values constantly.
The essential difference between 'Current Assets' and 'Fixed Assets' is that the current assets are held essentially for a short period and they are meant for converting into cash. Unsold stock, debtors bills receivables, bank balance, cash in hand, etc are some of the examples of current assets.
According to the Institute of Chartered Public Accountants, U.S.A., "Current Assets include cash and other assets or resources commonly identified as those which are reasonably expected to be realised in cash or sold or consumed during the normal operating cycle of the business.

c. Fictitious Assets:
Assets of no real value but included in the balance sheet for legal or technical reasons, e.g., preliminary expenses.

d. Tangible and Intangible Assets:
Tangible assets are those assets, which can be seen and touched i.e. assets having their physical existence e.g. land and building, plant and machinery, furniture and fixtures, stock-in-trade, cash, etc. Intangible assets cannot be normally sold in the open market since they are not having any physical existence e.g. goodwill, patents, trade marks, prepaid expenses etc.

e. Liquid Assets:

Assets that can be easily converted into cash like Bank account, Bills receivables, etc. As a matter of fact, all current assets excluding stock-in-hand and prepaid expenses are called liquid assets.

f. Wasting Assets:

These are the assets which are exhausted with, or which lose themselves in, the goods they produce. Mines and quarries are common examples of such assets. Copyright, patents, trademarks, etc. are also classified as wasting assets since they get exhausted with the lapse of time.

- **Fixed Assets (June 01)**

These are those assets, which are acquired for relatively long periods for carrying on the business of the enterprise. Such assets are not meant for resale. For example, Land and Building, Plant and Machinery, etc. Current assets provide benefits to the organization by their exchange into cash. In the case of fixed assets, value addition arises by facilitating the process of production or trade.

All man made things have limited life. In accounting, we are concerned with the useful life of the assets. Useful life is the period for which a fixed asset could be economically used. Benefits from the fixed assets will flow to the organization throughout its useful life.

Valuation of the fixed assets is usually made on the basis of original cost. However, since the assets have the limited life the cost will be expiring with the expiration of the life. Thus, valuation of the asset is reduced proportionate to the expired life of the asset. Such expired cost is known as depreciation.

Example:

Suppose a trader buys a delivery van at a cost of Rs. 50,000. Assume that the van will have to be discarded as junk at the end of five years. In this case we take a depreciation of Rs. 10,000 per year and the process of providing depreciation for each year will continue. At the end of the fifth year the valuation of the asset will be zero. The value of the assets at cost is usually referred to as gross fixed assets and the amount of depreciation to date as accumulated depreciation. Net value of the asset is usually referred to as net fixed assets.

Fixed assets normally include assets such as land, building, plant, machinery, etc. **All these items, with exception of land, are depreciated.** Land is not subject to depreciate and hence shown separately from other fixed assets.

- **<u>Accrued Liabilities (June 98)</u>**

Accrued liabilities represents expenses or obligations incurred in the previous accounting period but the payment for the same will be made in the next period. In many cases where payments are made periodically, such as wages, rent and similar items, the last month's payment many appear as accrued liabilities (especially if the practice is to pay the same on the first working day of a month). This obligation shown on the balance sheet indicates that the firm owed the said amount on the balance sheet date.

- **<u>Contingent Liability (Dec. 99, Dec.00)</u>**

These are liabilities which will exist or not, will depend on any future incident. For the sake of shareholders', it is shown in the footnote in the Balance Sheet. The items, which may come under this sub-heading, are:

i. Claims against company, which are still not accepted by the company.

ii. Liability for amount uncalled on partly paid shares.

iii. Arrears of fixed cumulative dividends.

iv. Estimated amount of incomplete contracts (capital expenditures), arrangement of which is not made.

v. Other contingent liability. For example, liability for bill discounted, disputed liabilities or claim, etc.

- **<u>Accounts Receivables (June 99)</u>**

Accounts receivables are amounts owed to the company by debtors. This is the reason why we also use the term sundry debtors to denote the amounts owed to the firm. This represents amounts usually arising out of normal commercial transactions. In other words, 'accounts receivable' or sundry debtors represents unpaid customer accounts. These are also known as trade receivables, since they arise out of normal trading transactions. Trade receivables arise directly from credit sales and as such provide an important information for management and outsiders. In most situations these accounts are unsecured and have only the personal security of the customer.
It is normal that some of these accounts default and become uncollectible. These collection losses are called bad debts. It is not possible for the management to know exactly which accounts and what amount will not collected. However, based on past experience, it is possible for the management to estimate the loss on the receivables or sundry debtors as a whole. Such estimates reduce the gross value of account receivable to their estimated realizable value.

For example:

	Rs.	
Accounts Receivable	**6,00,000**	
Less: Estimated collection loss at 5%	**30,000**	
Net realizable value of accounts receivable		**5,70,000**

The estimated collection loss is variously referred to reserve for doubtful debts, reserve for bad debts or reserve for collection losses. It is also not an uncommon practice to refer to this as a provision instead of reserve.

It is a usual practice for debts to be evidenced by formal written promises to pay or acceptance of an order to pay. These formal documentary debts represent **Promissory Notes Receivable or Bills Receivable**. These instruments used in trade are negotiable instruments and hence enable the trader to assign any of his receivables to another party or a bank for realizing immediate liquidity.

It is also usual for account receivables to be pledged or assigned mostly to banks against short-term credits in the form of **cash credits** or **overdrafts.**

CONSTRUCTION AND ANALYSIS OF PROFIT AND LOSS ACCOUNT

Introduction

In the previous chapter, you have studied about the balance sheet. It is intended for reporting the value of assets, liabilities and owners' equity at a particular point in time. It does not disclose any thing about the details of the business. So another statement is required to summarize revenues and expenses of the particular period. This statement is referred to as profit & Loss Account, Income statement or Income summary.

The Profit & Loss account summarizes all the revenues or incomes and all the expenses for earning that revenue showing the net difference, that is profit or loss for the period.

Capital Expenditure and Revenue Expenditure

Q. What do you mean by Capital Expenditure and Revenue Expenditure?

In fact every expense is expenditure, but each expenditure is not necessarily an expense. They are definitely not synonyms. Those business expenses, which affect directly the profits for the accounting period, are called Revenue Expenditure. Those which do not directly affect the profit, but the benefits of which result over longer periods of life of the business (say five to ten years) are called Capital Expenditure. The revenue expenditure or expense is shown in P & L A/c while the capital expenditure is shown in Balance Sheet.

Capital Expenditure

All expenditure incurred in acquiring fixed assets, or improving the existing ones by increasing its efficiency (e.g. by providing substitution, alteration or renovation), or effecting economy in operation of existing assets (e.g. by attaching power motor to hand driven machine) are called capital expenditure. These expenditures are intended to be permanently used in business and they increase the earning capacity of the enterprise. They mayor may not reduce the existing expenses.

The following types of expenditures fall under this category:

i. Expenditure incurred on any tangible or intangible asset, which can be sold or converted into Cash in future.

ii. Expenditure incurred on improving an existing asset so as to increase its earning capacity.

iii. Expenditure incurred on a new asset to bring it to workable condition.

iv. Expenditure for acquiring a capital asset.

The following can be quoted as examples:

i. Payment for Goodwill.

ii. Cost of freehold Land & Building.

iii. Cost of Leasehold Land.

iv. Payment for acquiring Trademark, Patents, Copyright, Pattern & Design etc.

v. Plant and Machinery and Furniture purchased for the use in business.

vi. Motor Car, Truck, etc. for the use in business.

vii. Installation expenses of Plant & Machinery.

viii. Expenses of Electric Fittings.

ix. Addition to the value of present assets.

x. Expenditure on extension of mines and gardens.

xi. Acquiring an asset and spending on its erection, etc.

It must be remembered that the benefits of the capital expenditure are spread over several years. Hence only a portion of these expenditure is included in the income statement of each year, Such an expenditure when incurred is called Capital outlay and the portion which is earmarked for a particular accounting period is called Depreciation. This depreciation goes to the Profit and Loss A/c (and is reduced from the total capital outlay), while the rest which is called cost residue is transferred to balance sheet. Since capital expenditure are transferred to balance sheet they are also called balance sheet expenditure.

Revenue Expenditure

They are all such expenses, which are incurred on the organisation and for running the business. The benefits of such expenses are limited to the accounting period only. They are incurred to maintain the earning capacity of the business, whereas capital expenditure are incurred to improving the earning capacity of the business.

The following types of expenditures are usually called revenue expenditure.

i. Expenditure incurred on acquiring raw material and business goods.
ii. Such expenditure whose advantage does not last for more than a year.
iii. Expenditure incurred for the maintenance of an asset.
iv. Expenses to run the business efficiently e.g. office expenses. Financial expenses, selling expenses, distribution expenses etc.

The list given under can be quoted as examples:

i. Cost of Raw material.
ii. Goods purchased for re-sale.
iii. Wages paid.
iv. Administrative Expenses wages, salaries, insurance, rent and advertisement etc.
v. Repairs and upkeep of fixed assets.
vi. Annual rent of Leasehold Land.
vii. Loss due to fire
viii. Distribution expenses.
ix. Selling expenses.
x. Interest on Loans.
xi. Depreciation, etc.

It must, however, be remembered that the examples as has been shown above are not universally accepted. These are the heads of expenditures which by and large, are classified as such. But in actual practice, whether an item of expenditure is a capital or revenue expenditure will depend on its purpose and nature of the business concern. It may vary at different times also.

For example, expenditure on plant and machinery is a capital expenditure, but for engineering concern it may be revenue expenditure, if the plant is meant for resale. Similar is the case of furniture. It is generally a capital expenditure, but it may be revenue expenditure for a dealer in furniture. Likewise some items, generally of revenue nature may have to be capitalized under certain situations. They may be considered as exceptions to the general rules.

Some examples can be given as under:

Exceptions to the General Rules

i. Raw Materials:

When raw material is used for the manufacture, of an asset it is treated as Capital expenditure.

ii. Wages and Salaries:

This is revenue expenditure. But when wages and salaries are spent for the construction of a building or for installation of a machine then it is treated as Capital expenditure.

iii. Carriage and Freight:

These are also revenue expenditures but Carriage and Freight paid for bringing the machine to the godown, then it is treated as Capital expenditure.

iv. Repairs and Renewals:

These are revenue expenditures but when an old machine is purchased and some amount is spent to bring it to a workable condition then it is called Capital expenditure.

Q. Distinguish between Capital Expenditure and Revenue Expenditure.

i. Capital expenditure is the capital outlay on acquiring new assets, improving the existing ones, not with the intention of reselling them. Revenue expenditure is the routine types of recurring expenses, which are incurred for running the business. Besides, they include expenses for maintaining the upkeep of the existing assets.

ii. Capital expenditure increases the earning capacity of the business, whereas, Revenue expenses do not.

iii. The benefits of the capital expenditure are always spread over several years, whereas the revenue expenditure provides benefit only for the accounting period. That is the reason why only a part of the capital expenditure is accounted for in the accounting period and the balance is shown as an asset in the balance sheet. On the other hand, the entire amount of the revenue expenditure is accounted for in the accounting period. The nature of the two kinds can be better understood by the following example:

Deferred Revenue Expenditure

Q. Explain Deferred Revenue Expenditure.

Sometimes some expenditure is incurred which by nature is revenue expenditure, but its benefits are likely to be derived over a number of years. If revenue expenditure is incurred during the current year but paid as advance for the coming year(s), such expenditure is called 'Deferred Revenue Expenditure'. For example a firm may undertake a special advertising campaign for a new product and say spends rupees one lakh over it. The benefit of this advertisement may continue for say ten years. As such only one-tenth of this expenditure should be considered as revenue expense for the year and taken to P & L A/c and the rest as Deferred Revenue Expenditure and taken to balance sheet as asset. Such expenses are also sometimes called Capitalized Expenditure.

Usually the deferred revenue expenditure are of the following types:

i. Partly paid in advance. These are expenses, the benefits of which accrue to the current year as also to the future years. The utilized portion is accounted for the current year and the unused portion is shown as asset in the balance sheet.

ii. Wholly paid in advance. These are expenses, the benefit of which does not accrue to the current year, but the amount is paid during this period. As such the total amount is shown as asset in the current balance sheet.

iii. Unusual and abnormal losses. The business may get a shocking setback if the total abnormal losses are accounted for in one year. Loss by theft or fire may have to be spread over a few years. Some portion of it is accounted for in the current year and the unwritten portion is shown as an asset in the current balance sheet. Of course, this will be a worthless and fictitious asset.

Thus, these are revenue expenditure of capital nature. The following are its special features:

i. Expenditure for development, improvement and alterations are revenue expenditure but treated as capital expenditure.

ii. These expenditures are not immediately written off in the year of actual expenditure but split over a period of certain years as per the decisions and policies of the management.

iii. These expenditures are treated as assets and shown at the assets side of the Balance Sheet.

Capital Receipts and Revenue Receipts

Q. Explain Capital Receipts and Revenue Receipts.

Capital Receipts and Revenue Receipts

Revenue receipts, like revenue expenditures affect the P & L A/c and are shown on its credit side. Capital receipts, like capital expenditures do not affect profit, and are either shown as a liability or more often as a reduction from the assets. Any excess realisation over the book value of an asset may, however, be treated as a revenue receipt and accounted for as such. It is, therefore, essential to know the distinction.

Examples of Capital Receipts:

i. Capital invested by the owners of the business.
ii. Amount received from sales of fixed assets or investments.
iii. Conversion into Cash of any Asset except stock.
iv. Loans received.

Examples of Revenue Receipts:

i. Amount from sale of goods.
ii. Amount received from rendering services to other parties or interest received or commission received.

It is very difficult to make a clear-cut distinction between capital receipts and revenue receipts. The distinction is important both for income determination and taxation purposes. An important feature of revenue receipts has been that the amount received does not need to be returned to anyone.

Capital Loss and Revenue Loss.

Capital loss is that loss which occurs due to sale of some fixed asset. For examples, loss due to issue of shares or debentures at a discount, loss due to misappropriation of Cash from the office or forfeiture of security deposited for getting an agency. Revenue losses are those losses, which occur due to sale and purchase of goods. For example, Bad Debts, loss due to fall in the price of goods etc.

Whereas revenue loss is usually accounted for in the current year's P & L A/c, capital loss is usually spread over a few years.

TRADING ACCOUNT

"The Trading Account shows the results of buying and selling of goods. In preparing this account, the general establishment charges are ignored and only the transactions in goods are included." -J.R. Satliboi

The income statement is split into two parts. The first is called the Trading Account and the second the Profit and Loss Account. The trading account is designed to show the gross profit on sale of goods. This is achieved by setting against the net proceeds of sale, the cost of goods sold. The Trading Account contains, in a summarized form, the transaction of the trader relating to the commodities in which he deals, throughout the accounting period. All expenses, which relate to either purchase of raw material or production or manufacturing, are charged to the Trading A/c. It is prepared to find out Gross Profit or Gross Loss. If the sales are more than purchases and expenses the result is Gross Profit and vice versa.

In the beginning of the year the businessman has stock left from the last year. It is called Opening Stock. The goods remaining unsold this year is called Closing Stock. While preparing Trading A/c, Opening Stock is added to the Purchases and Closing Stock is added to the Sales. Trading A/c shows the Gross Profit or Gross Loss. The businessman can, with the help of Trading A/c compares the Purchases, Sales and Closing Stock of the current year with those of the last years. He can easily find out the ratio of Gross profit to the Sales and thus control his business expenses.

For a small businessman, Trading Account serves the purpose of Manufacturing Account as well. But a big businessman usually has to prepare a separate manufacturing account. The description of this account will be given at the appropriate place on pages to follow.

Trading Account: Importance

Q. Explain the importance of preparing Trading Account.

Importance of Preparing Trading Account

Preparation of Trading account serves the following objectives and provides data for comparison analysis and planning for future growth.

The purposes are:

i. It provides information about gross profit. The current figure can be compared with earlier ones and reasons found for variations. Accordingly plan can be launched for future growth of the firm.

ii. Ratio of gross profit to sales can help the trader to improve his business administration.

iii. Ratio of direct expenses to sales will help the trader to control and rationalize the expenses.

iv. Comparison of 'stock in hand' of the current year with those of the previous years. Reasons for variation can be found out and steps can be taken to adjust things more profitably.

v. Ratio of cost of goods sold to total sale proceeds can help the trader in fixing the prices of his products.

vi. Precautionary measures can be taken to avoid possible losses by analyzing the items of direct expenses.

The actual performance shown by the Trading Account as regards purchases, sales, stock and cost of production can be compared with the desired performance. In case of weaknesses, effective corrective measures can be applied. Besides, the actual performance as disclosed by the Trading Account is compared with the performance of the previous year. The comparison shows the plus and minus performance of the business. Such points should be identified. Minus points should be removed and plus points should be re-enforced.

Gross Profit disclosed by the Trading Account tells us the upper limit within which one should keep the operating expenses of the business besides saving something for himself. In case of new products, the businessman can easily fix up the selling price of the products by adding the cost of purchases, the percentage gross profit that he would like to maintain.

Trading Account: Items

Q. Explain briefly the items shown in the Trading Account.

Important Items of Trading Account are listed below:

Stock - The goods remaining unsold is called stock. It is of two types:

1. **Opening Stock:** In the beginning of the year the businessman has some unsold goods of the last year. It is called opening stock. It is shown on the debit side of Trading A/c.
2. **Closing Stock:** The goods remaining unsold at the end of the year is called Closing Stock. It i_ shown on the credit side of the Trading A/c. Opening Stock is given in the Trial Balance and Closing Stock is given below the Trial Balance because closing stock is valued after the accounts have been closed.

Valuation of Closing Stock

Closing Stock is valued at cost price or market price whichever is less. For example, the businessman purchased goods for Rs. 2,000 but at present its market value is Rs. 2,500. It will be valued at Rs. 2,000 and not at Rs. 2,500. Another goods costs Rs. 3,600 but now its present value are Rs. 2,600. It will be valued at Rs. 2,600. This decision is followed on the principle that a gain cannot be treated a gain unless it is actually received but a loss is treated as loss when it is clearly visible. Thus we can say expected gain is no gain but expected loss is a loss.

Closing Stock should be valued very carefully and correctly. A list of the unsold stock should be carefully prepared and its price written against every item. This work should be done by capable and experienced person and checked by some reliable officer. It should be kept in mind that if the Closing Stock were valued at a higher price the Gross Profit of the business would be wrong and misleading.

Goods to be included in Closing Stock

1. Goods remaining unsold at the end of the year are called Closing Stock.
2. If there are other branches of the business the closing stock of all the branches should be included.
3. If goods have been sent on Consignment the stock remaining unsold with the consignee should also be included.
4. If the businessman has not taken into consideration some purchases or sales returns these should also be included in the Closing Stock.

Component of Closing Stock

1. **Stock of Raw Materials.** If the businessman is a manufacturer and he will be having some stock of raw material at the end of year it should be included in the Closing Stock.
2. **Stock of Finished Goods.** The part of the finished goods unsold should also be included in the Closing Stock.
3. **Stock of Work- in-progress.** The goods which is not ready but is expected to be ready shortly is called Work-in-progress and should also be included in the Closing Stock.
4. **Stores.** The goods required for converting the raw material into finished goods should also be included in the Closing Stock. e.g., machine oil, chemicals, coal, gas, etc.

Purchases and Purchases Returns

Purchases Account tells the quantity of total goods purchased and the Purchases Returns A/c shows the goods returned out of purchases. It is shown on the Trading A/c in the following manner:

To Purchases
Less Purchases Returns

Direct Expenses

These are those expenses that are included in the manufacture of goods or expenses incurred in importing goods and carrying them to the godown. In other words we can say those expenses that are incurred in bringing the goods to saleable condition are called direct expenses. Direct expenses include the following:

1. **Wages:** It is shown on the debit side of the Trading A/c and shows the wages paid in the production of goods.
   Note 1. If wages are paid for bringing a new machine or for its installation, it is treated as part of the cost of the machine and is shown in the Assets.
   Note 2. If the expense is recorded as 'Wages and Salaries' it would go to Trading A/c. If it is 'Salaries and Wages' it would go to P & L A/c.

2. **Carriage Inward:** Carriage paid will be shown on the debit side of the Trading A/c. Carriage outward is shown on the debit side of Profit and Loss A/c.
3. **Manufacturing Expenses:** All those expenses, which incurred in manufacture of goods, are shown on the debit side of the Trading A/c. e.g., factory fuel and oil, factory lighting, coal and gas, etc. If lighting of the factory and office are given together then they are apportioned.
4. **Carriage and Freight:** Carriage and freight paid for bringing the goods purchased is a direct expense and debited to Trading A/c.
5. **Sales and Sales Returns:** Sales are shown on the credit side of the Trading Ale but to arrive at Net Sales the Sales returns should be deducted.

Profit & Loss Account

Q. What is a Profit & Loss Account? How it is prepared? Why it is prepared?

According to Prof. Carter, "**A Profit and Loss account is an account into which all gains and losses are collected in order to ascertain the excess of gains over the losses or vice versa**".

It must be remembered that expenses relating to the owner or partners are not to be accounted for in the Profit and Loss A/c of the firm. They are personal expenses and hence are transferred to the Drawings A/c of the owner or partners.

These expenses are usually
(i) Life insurance premium,
(ii) Income tax, and
(iii) Household or personal expenses.

The objectives of preparing P & L A/c can be briefly summed up as under:

i. Provides information about Net Profit;
ii. Comparison of current year's income with that of the previous year's can be made;
iii. Concrete steps may be taken to increase the net profit in future through analysis of expenses.
iv. Proper allocation of net profit can be made among partners and provision for various types of Reserves as also for Research and Development programs can be made.
Importance of Profit and Loss Account

The purpose and importance of preparing Profit and Loss Account is as under:

i. The purpose of preparing profit and loss account is to ascertain the amount of net profit or net loss. This is the actual profit available to the proprietor and credited to his capital account. In case of net loss his capital account will be debited. The net profit is calculated after charging all indirect expenses.

ii. It is an index of the profitability or otherwise of the business. The profit figure disclosed by the profit and loss account for a particular period can be compared with that of the other period. Thus, it helps in ascertaining whether the business is being run efficiently or not.

iii. An analysis of various expenses included in the profit and loss account and their comparison with the expenses of the previous periods helps in taking steps for effective control of the various expenses.

iv. The net profit is matched with the net sales to calculate net profit ratio'. This ratio is compared with the desired ratio and if there is any short-.coming, that will be removed. Similarly expenses ratio to sales is calculated. It will always be in the interest of the firm that the expense ratio should be the minimum.

v. Allocation of profit among the different periods or setting aside a part of the profit for future contingencies can be done. The amount of provisions, reserves and funds to be maintained depends upon net profit earned by the firm.

vi. We can adopt effective future line of action on the basis of information available from profit and loss account regarding net profit and other expenses.
Last but not the least, we compare our actual performance with our planned and desired performance, identify weaknesses and try to remove them.

Trading and Profit & Loss Account

Particulars	**Rs.**	Rs.	**Particulars**	**Rs.**	Rs.
To Opening Stock		XXX	By Sales	XXX	
To Purchases	XXX		Less: Sales Return	XXX	XXX
Less: Purchases Return	XXX	XXX	By Closing Stock		XXX
To Wages		XXX	By Gross Loss t/f to Profit & Loss A/c		XXX
To Carriage and Cartage		XXX			
To Manufacturing Expenses		XXX			
To Coal, Water & Gas		XXX			
To Factory Lighting		XXX			
To Fuel & Power		XXX			
To Motive Power		XXX			
To Octroi		XXX			
To Factory Rent and Rates		XXX			
To Custom Duty		XXX			
To Dock Charges		XXX			
To Gross Profit t/f to Profit & Loss A/c		XXX			

	XXX		XXX
To Gross Loss t/f from Trading A/c	XXX	By Gross Profit t/f from Trading A/c	XXX
(A) Selling and Distribution Expenses:		Interest (Cr.)	XXX
Advertisement	XXX	Discount (Cr.)	XXX
Travelers Salaries and Commission	XXX	Commission (Cr.)	XXX
Salesman’s Salaries and Commission	XXX	Rent from Tenants	XXX
Bad Debts	XXX	Income from Investment	XXX
Godown Rent	XXX	Miscellaneous Receipts	XXX
Export Expenses	XXX	Apprenticeship Premium	XXX
Packing Charges	XXX	Difference in Expenses (Cr.)	XXX
Carriage Outward	XXX	Dividend on Shares	XXX
Insurance	XXX	Interest on Debentures	XXX
Agent’s Commission	XXX	Income from any other source	XXX
Upkeep of Motor Lorries	XXX	Provision for discount from creditors	XXX
(B) Management Expenses:		Interest on renewal of bills	XXX
Rent, Rates and Taxes	XXX	By Net Loss t/f to Capital A/c	XXX
Heating and Lighting	XXX		
Office Salaries and Wages	XXX		
Printing and Stationery	XXX		
Postage and Telegrams	XXX		
Telephone Charges	XXX		
Legal Charges	XXX		
Audit fee	XXX		
Insurance	XXX		
Upkeep of Motor Car	XXX		
General Expenses	XXX		
(C) Depreciation and Maintenance:			
Depreciation	XXX		
Repairs and Maintenance	XXX		
(D) Financial Expenses:			
Interest on Capital	XXX		
Interest on Loans	XXX		
Discount Allowed	XXX		
Cost of Discounting the bills	XXX		
(E) Extra-Ordinary Expenses:	XXX		
Loss by fire (not covered by insurance)	XXX		
Cashier defalcations	XXX		
To Net Profit t/f to Capital A/c	XXX		
	XXX		XXX

Q. What are the basic requirements of preparing Profit & Loss Account?

Profit and loss account should be prepared in such a manner as to clearly disclose the results of the working of the company during the period covered by the account. It should also disclose every material feature including credits or receipts and debits or expenses in respect of non-recurring transactions or transactions of an exceptional nature. It should also disclose various items relating to income and expenditure of company under proper headings. And where need be the detailed information of certain items can be given in separate schedules, which then form part of the profit and loss account. As in the case of the balance sheet, figures for the immediately preceding financial year for all items shown in this account have also to be given. In short the following principles govern the preparation of this account:

i. **Materiality**: It means the relative importance of an item or amount in a given situation. Thus all significant points, which are likely to influence the investment, decisions or otherwise of various users of this statement must be disclosed. For example, if large quantities of raw materials are sold resulting in the considerable profit or loss, such a sale should not be included in the Sales Account. Instead, profit or loss on this item must be shown separately. What is material or not will depend on individual case.

ii. **Prior-period items**: They may be defined as material charges or credits which arise in the current accounting period as a result of errors and omissions in the preparation of financial statements of one or more prior periods. As a rule the profit and loss account should disclose the working of the company during a particular year. It is therefore imperative that items of income and expenditure must pertain to that year only. When the provision for expenses made during the previous year is less than the actual expenditure during the year, the excess of expenditure over the provision made during the previous year, should be disclosed in the profit and loss account separately, if it is material in natures. For example salaries of the University employees have been revised with effect from January 1996 but the decision was taken only in March 1998. The increased salaries for 1997-98 can certainly be absorbed in the 1997-98 salaries but the increased salaries for three months of 1996-97 will also have to be accounted for and instead of clubbing them with the salaries of the current year, they should be shown separately. ICAI opines that prior period items should be stated in the profit and loss appropriation' section when profit and loss account is prepared in a horizontal (account) form. In the case 6f profit and loss account prepared in the vertical form, the same purpose can be achieved by arriving at current year's result and thereafter adding or deducting therefrom, as the case may be the prior year items. [Compendium of Opinions 2nd Ed. p. 29]

iii. **Extra-ordinary items**: AS-5 defines such items as gains or losses which arise from events or transactions that are distinct from the ordinary activities of the business and which are both material and expected not to recur frequently or regularly. For example, profit or loss from the sale of fixed assets or speculation gains or losses are unusual items not connected with the ordinary activities of the business. Though such items should be shown in the profit and loss account as a part of net income but the nature and amount of each such item should be disclosed separately in a manner that their relative significance and effect on the current operating results can be easily seen.

iv. **Change in accounting policies**: A change in accounting policy such as method of inventory valuation or change in rate or method of depreciation should be disclosed with its effect on profit or loss resulting from such a change. AS-5 recommends that a change in accounting policy should be made if the adoption of a different accounting policy 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 an enterprise.

v. **Accrual basis of accounting**: Section 209 (3) requires every company to keep its books of account on accrual basis and follow the double entry system of accounting popularly known as mercantile system of accounting which alone discloses a true and fair view of the state of affairs of a company. The accrual basis of accounting records the financial effects of the transactions, events and circumstances of an enterprise in the period in which they occur rather than recording them in the periods in which cash is received or Raid by the enterprise. The main objective of the accrual basis of accounting is to relate the accomplishments (measured in the form of revenues) and the efforts (measured in terms of cost) so that the reported net income reflects the performance of the enterprise during a period rather than being a mere listing of its cash receipts and payments [ICAI: Guidance Note' on Accrual Basis of Accounting]

Major items as per part II of Schedule VI

The main contents of profit and loss account are outlined below:

1. **Turnover or Sales**:

The aggregate amount for which sales are affected by' the company and connected items with the turnover such as commission paid to sole-selling agents [Section 294];- and other selling agents and brokerage and discounts on sales other than usual trade discount.

2. **Cost of sales, stocks and work-in-progress**:

The details in respect of these items are to be given as : (a) the purchase of raw materials and the opening and closing stock of the goods produced for a manufacturing concern;(b) in the case of trading concerns, 'the purchases made and the opening and closing stocks. The term raw materials would include materials, which physically enter into the composition of the finished goods. Monetary and quantitative information regarding opening and closing stocks have to be given in respect of each class of goods. In addition, the opening and closing balances of work-in-progress are also to be given.

3. **Stores, power, rent, repairs, salaries etc**.:

These are to be stated separately as the consumption of stores; power and fuel, rent, repairs to building, machinery; salaries, wages and bonus; contribution to provident fund and other funds-staff and workmen welfare-rates and taxes etc.

4. **Depreciation:**

The amount provided for depreciation, renewals, diminution in the value of fixed assets and the method adopted for such a provision, where no such provision is made and the details regarding arrears of depreciation as per Section 205(2) shall be disclosed by way of foot note.

5. **Interest on loans and debentures**:

Interest on different types of loans and company's debentures has to be stated separately. It will include the amount of interest paid as well as payable.

6. **Miscellaneous expenses**:

This head includes items such as rent, rates and taxes, insurance premium etc., which must be stated separately. It is provided that in case an item exceeds one per cent of total revenue of the company or Rs. 5,000, whichever is higher, such an item should be shown as a separate and distinct item in the profit and loss account.

7. **Managerial remuneration**:

The payments made to directors or managers of the company have to be stated in the profit and loss account in the form of managerial remuneration, other allowances and commission, directors' fees, pension, gratuities, etc.

8. **Payments to auditors**:

The payments made to auditors as auditors and in any other capacity must be stated separately. This will include audit fees, consultancy fees for taxation matters, company law matters, and management services and in any other matter etc.

9. **Payment of-interim relief**

: Interim relief is normally given to employees till the final settlement of wages. At the time of final settlement, the amount of interim relief is absorbed or merged with the final regular wages. Thus the interim relief granted to the employees is normally not in the nature of an advance, as the said amount is not deducted from the wages of the employees after final settlement. Accordingly the amount in respect of interim relief should be treated as an expense in the year in which it is paid under the appropriate head and is not to be treated as an advance.

10. **Premium paid on insurance covering gratuity liability**:

The premium of LIC policy taken for covering the gratuity liability is worked out by the actuarial valuation of increase in gratuity liability during the year; it is not based on time factor. As the premium is not based on time factor, the premium paid may be debited to the profit and loss account for the year. There IS no question of prepaid premium.

Dividends remitted in foreign currency:

According to ICAI, the disclosure of dividends remitted in foreign currency during the year should be made on cash basis.

Depreciation

Q. Distinguish between Straight Line and Written Down Method of providing depreciation. (Dec. 01)

Straight Line Method/Original Cost Method/Fixed Instalment Method:

Under this method, the amount of depreciation is uniform from year to year. This fixed amount of depreciation is charged to Profit and Loss A/c every year. The annual amount of depreciation can be easily calculated. Out of the cost of the asset its scrap value id deducted and it is divided by the number of years of its estimated life.

$$\text{Depreciation} = \frac{\text{Original Cost} - \text{Scrap Value}}{\text{Estimated life of Asset}}$$

Written Down Value Method/Diminishing Balance Method/Reducing Balance Method:

Under this method also the cost of the assets less estimated scrap value has to be written off over its estimated life. A certain percentage is calculated on the book, and not the cost of the asset. Thus the amount of depreciation goes on falling every year. The value of asset never comes to zero under this method.

Difference between Straight Line Method and Written Down Value Method

1. Amount of Depreciation: The amount of depreciation remains the same all the years under straight-line method, while it goes on decreasing every year under the written down value method.

2. Computation of Depreciation: Under straight line method of depreciation, depreciation is charged on the original cost of the asset, while it is charged on the reducing balance every year under written down value method.

3. Value of Asset: Under the straight line method the value of the asset become nil at the end of its working life but it never becomes nil under the written down value method.

4. Rate of Depreciation: Normally, the rate of depreciation is lower under straight-line method whereas it is higher under the diminishing balance method.

5. Recognition: The straight line method of depreciation is not recognized by the income tax authorities while the later method is well recognized by them.

Q. Distinguish between the FIFO and LIFO methods of inventory valuation. (Dec. 01)

Basic of Distinction	FIFO	LIFO
1. Basic Assumption	Goods received first are issued first.	Goods received last are issued first.
2. Cost of goods sold	Cost of goods sold represents cost of earlier purchases.	Cost of goods sold represents cost of recent purchases.
3. Ending Inventory	Ending inventory represents cost of recent purchases	Ending inventory represents cost of earlier purchases.
4. In case of rising prices	Higher income is reported since old costs (which are lower that current costs) are matched with current revenue. As a result, income tax liability is increased.	Lower income is reported since current costs (which are higher that the old costs) are matched with current revenue. As a result, income tax liability is reduced.
5. Distortion in Balance Sheet	Balance Sheet shows the ending inventory at a value neared the current market price.	Balance Sheet is distorted because ending inventory is understated at old costs.

Inventory Valuation

Profit

Q. Explain the following:

- Gross Profit
- Operating Profit (June 01)
- Net Profit (June 02)

Gross Profit

Gross Profit is obtained by subtracting the cost of goods sold from Net sales.

Gross Profit = Net Sales – Cost of Goods Sold
Cost of Goods Sold = Opening Stock + Net Purchases + Direct Expenses – Closing Stock
And Net Sales = Total Sales – Sales Return

Operating Profit (June 01)

Operating Profit means profit earned by the concern from its business operation and not from the other sources. While calculating the net profit of the concern all incomes either they are not part of the business operation like Rent from tenants, Interest on Investment etc. are added and all non-operating expenses are deducted.
So, while calculating operating profit these all are ignored and the concern comes to know about its business income from its business operations.

Mathematically,

Operating Profit = Gross Profit – Operating Expenses
Or Operating Profit = Net Profit + Non Operating Expenses – Non Operating Incomes
And Net Sales = Total Sales – Sales Return

Net Profit (June 02)

This is the amount ultimately available to the company for appropriation. This amount could be either distributed as dividends to shareholders or retained in the business as retained earnings. This is variously referred to as PAT (Profit after tax) or EAT (Earnings after tax). After subtracting dividends declared, and surplus remaining is added to retained earnings, that is, reserves & surplus.

Net Profit = Gross Profit – Selling and Distribution Expenses – Office and Administration Expenses – Financial Expenses – Non Operating Expenses + Non Operating Incomes.
And Net Sales = Total Sales – Sales Return

Q. Distinguish between gross profit, operating profit, & net profit. (June 99, June 98)
Please refer to the previous question for details.

CONSTRUCTION AND ANALYSIS OF FUNDS FLOW STATEMENT

Introduction:

The term funds may be used differently depending on the users' purpose. Literally, it means a supply that can be drawn upon.

Funds flow is used to refer to changes in or movement of current assets and current liabilities. This movement is of vital importance in understanding and managing the operations of a business.

Funds Flow Statement: Objectives

Q. What is a Funds Flow Statement? (Jan. 01, June 02)
What are the objectives of Funds Flow Statement?

Funds Flow Statement consists three terms Funds, Flow and Statement

Where

Funds = Current Assets – Current Liabilities = Working Capital
Flow = Changes

A statement, which shows 'Flow of Funds' or 'Changes in Working Capital' is called "Funds Flow Statement".

Funds Flow Statement is prepared to workout the sources from where the additional funds have been received during the year and for what purposes these funds have been applied.

According to **Smith Brown**, "Funds Flow Statement is prepared in summary form to indicate changes (and trends if prepared regularly) occurring in items of financial condition between two different balance sheet dates."

According **to R.N. Anthony**, " Funds Flow Statement is a statement prepared to indicate the increases in the cash resources and the utilisation of such resources of a business during the accounting period."

Objectives of Funds Flow Statement :

Profit & Loss Account and Balance Sheet are not able to give answer to some basic questions. For this purpose Funds Flow Statement is prepared. According to Perry Mason who points out in AICPA Research Study No. 2 that without such a statement, the following questions will remain unanswered:

1. Where did profit go?

2. Why were dividends not larger?

3. How was it possible to distribute dividends in excess of current earnings or in the presence of net loss for the period?

4. Why were the net current assets down although the net income is up?

5. How is that the net current assets are up even though there was a net loss for the period?

6. Why must money be borrowed to finance purchase of new plant and equipment when the required amount is exceeded by the "cash flow" (the sum of net income and depreciation)?

7. How was the expansion in plant and equipment financed?

8. What happened to the proceeds of the sale of plant and machinery resulting from a contraction of operation.

9. How was the retirement of debt accomplished?

10. What became of the assets derived from an increase in out-standing capital stock?

11. What became of the proceeds of the bond issue?

12. How was the increase in working capital financed?

Preparing Funds Flow Statement

Q. Define the terms ‘Fund’ and ‘Flow’ in the context of the funds flow statement.
How is a funds flow statement prepared? (Jan. 01, June 02)

Meaning of the term ‘Fund’: -

The term ‘Fund’ has been assigned different meanings by different people. In narrow sense ‘Funds’ means cash and Bank balance. To many people funds is nothing but having the net effect of various business events on the basis of cash. This explains the trend towards the preparation and presentation of "Cash Flow Statement" in published report of accounts.

But in wider sense the term ‘Fund’ is the sum of cash and assets, which are easily convertible into cash minus current liabilities. In other words ‘Fund’ means excess of current assets over current liabilities. Where current assets include cash in hand, cash at bank, bills receivable, sundry debtors, stock, marketable securities and prepaid expenses etc. The current liabilities include sundry creditors, bills payable, outstanding expenses, short-term loans and bank overdraft etc.

Funds = Current Assets – Current Liabilities = Working Capital

Meaning of the term 'Flow': -
The term 'Flow' means change. Therefore flow of funds means change in working capital. The change in funds may be either positive or negative. It may be inflow of funds or outflow of funds.

Preparation of funds flow statement:

A funds flow statement is basically prepared from non-current items of the balance sheets, prepared at the end of two accounting periods. It takes into account the sources and uses of funds during that accounting period. The major sources and applications of funds are as under:

Funds Flow Statement

Sources	Rs.	Applications	Rs.
Funds from Operation	XXX	Funds Loss from Operation	XXX
Issue of Equity Share Capital	XXX	Redemption of Preference Share Capital	XXX
Issue of Preference Share Capital	XXX	Redemption of Debentures	XXX
Issue of Debentures/Long term Loans	XXX	Repayment of Long term Loans	XXX
Premium on issue of shares/debentures	XXX	Premium on redemption of preference shares/debentures	XXX
Sale of Investments	XXX	Purchase of Investments/Fixed Assets	XXX
Sale of Fixed Assets	XXX	Dividend Paid	XXX
Net decrease in working capital(Bal. Fig.)	XXX	Taxes Paid	XXX
		Drawings by proprietor/partner	XXX
		Net increase in working capital (Bal. Fig.)	XXX
	XXX		XXX

Example: The Balance Sheets of X Ltd. as on Dec. 31, 2004 and Dec. 31, 2005 were as follows:

Liabilities	2004 Rs.	2005 Rs.	Assets	2004 Rs.	2005 Rs.
Share Capital	5,00,000	7,00,000	Land and Building	80,000	1,20,000
General Reserve	50,000	70,000	Plant & Machinery	5,00,000	8,00,000
Profit & Loss A/c	1,00,000	1,60,000	Stock	1,00,000	75,000
Sundry Creditors	1,53,000	1,90,000	Sundry Debtors	1,50,000	1,60,000
Bills Payable	40,000	50,000	Cash	20,000	20,000
Outstanding Expenses	7,000	5,000			
	8,50,000	11,75,000		8,50,000	11,75,000

Additional information:

a. Rs. 50,000 depreciation has been charged to Plant & Machinery during the year 2005.
b. A piece of machinery costing Rs. 12,000 (Depreciation provided thereon Rs. 7,000) was sold at 60% profit on book value.

Required: - Prepare Funds Flow Statement.

Funds Flow Statement
for the year ending on 31st December 2005

Sources	Rs.	Applications	Rs.
Issue of Share Capital	2,00,000	Purchase of Land and Building	40,000
Sale of Plant and Machinery	8,000	Purchase of Plant and Machinery	3,55,000
Funds From Operation	1,27,000		
Net Decrease in Working Capital	60,000		
	3,95,000		3,95,000

Schedule of Changes in Working Capital

Particulars	2004 Rs.	2005 Rs.	Increase Rs.	Decrease Rs.
Current Assets:				
Stock	1,00,000	75,000		25,000
Debtors	1,50,000	1,60,000	10,000	
Cash	20,000	20,000		
	2,70,000	2,55,000		
Current Liabilities:				
Sundry Creditors	1,53,000	1,90,000		37,000

Bills Payable	40,000	50,000		10,000
Outstanding Expenses	7,000	5,000	2,000	
	2,00,000	**2,45,000**		
Working Capital	70,000	10,000		
Net Decrease in Working Capital		60,000	60,000	
	70,000	**70,000**	**72,000**	**72,000**

Workings

Adjusted Profit & Loss Account

Particulars	Rs.	Particulars	Rs.
To General Reserve	20,000	By Balance b/d	1,00,000
To Depreciation	50,000	By Gain on sale of Machinery	3,000
To Balance c/d	1,60,000	By Funds from Operation (Bal. Fig.)	1,27,000
	2,30,000		**2,30,000**

Plant and Machinery Account

Particulars	Rs.	Particulars	Rs.
To Balance b/d	5,00,000	By Depreciation A/c	50,000
To Profit & Loss A/c (Gain on sale)	3,000	By Bank A/c (Sale)	8,000
To Bank A/c (Bal. Fig.)	3,55,000	By Balance c/d	8,00,000
	8,58,000		**8,58,000**

Note:

Book Value of Machinery sold = Original Cost – Depreciation provided = Rs. 12,000 – Rs. 7,000 = Rs. 5,000.
Profit on Sale of Machinery = 60/100 x Rs. 5,000 = Rs. 3,000.
Therefore, Machinery sold for Rs. 8,000 (i.e. Rs. 5,000 + Rs. 3,000)

Inflow & Outflow of Funds

Q. When does flow of fund take place? Explain briefly.

Flow of fund takes place whenever there is change in working capital. This change may be either inflow or outflow of funds. There are a few examples of inflow and outflow of funds:

Issue of Equity Share Capital

Issue of Preference Share Capital
Issue of Debentures/Long term Loans
Premium on issue of shares/debentures
Sale of Investments
Sale of Fixed Assets

Redemption of Preference Share Capital
Redemption of Debentures
Repayment of Long term Loans
Premium on redemption of preference shares/debentures
Purchase of Investments/Fixed Assets
Dividend Paid
Taxes Paid
Drawings by proprietor/partner

Distinguish between:

a. Funds Flow Statement and Position Statement i.e. Balance Sheet
b. Funds Flow Statement and Profit & Loss Account
c. Funds Flow Statement and Schedule of Changes in Working Capital

Basis of Difference	Balance Sheet	Funds Flow Statement
Objective	A balance sheet is prepared in order to show the financial position of a business at a particulars date.	A funds flow statement is prepared in order to show the overall inflow or outflow of working capital during a period of time.
Incorporation	A balance sheet incorporates all assets and liabilities of the business on a particular date.	A funds flow statement incorporates the different sources and application of funds during a period.
Basis	The balance sheet is prepared on the basis of balances of ledger at the end of a particular period.	Funds flow statement is prepared on the basis of Profit & Loss A/c, Balance Sheet and other additional information.
Format	A balance sheet is prepared in a prescribed format by Indian Companies Act.	There is no prescribed format for preparation of funds flow statement.
Concept	A balance sheet is based on stock concept. It shows the position of assets and liabilities on a particular date.	A funds flow statement is based on flow concept. It shows the causes for changes in working capital during a period of time.

Compulsion	It is compulsory for a company to prepare and present its balance sheet at the time of its general meeting.	It is not compulsory for a company to prepare and present funds flow statement.

(b) Distinction between Funds Flow Statement and Profit & Loss Account

Basis of Difference	Profit & Loss Account	Funds Flow Statement
Objective	Profit & Loss A/c is prepared to workout net profit or net loss of the business.	A funds flow statement is prepared in order to show the overall inflow or outflow of working capital during a period of time.
Contents	Profit & Loss A/c is prepared on the basis of nominal accounts.	Funds flow statement is prepared on the basis of non-current assets and liabilities.
Compulsion	It is compulsory for a company to prepare its Trading and Profit & Loss A/c at the end of its accounting period.	It is not compulsory for a company to prepare funds flow statement.
Capacity	Profit & Loss A/c is prepared in order to show the performance of business activities.	Funds flow statement helps in financial activities of a business.
Tool of financial analysis	Profit & Loss A/c is one of the basic financial statements, which provides information for analysis of financial statement.	Funds flow statement is an important tool of analysis of financial statement.

c) Distinction between Funds Flow Statement and Schedule of Changes in Working Capital

Basis of Difference	Schedule of Changes in Working Capital	Funds Flow Statement
Objective	Schedule of changes in working capital is prepared to workout the net increases or decreases in working capital.	A funds flow statement is prepared in order to show the overall inflow or outflow of working capital during a period of time.
Basis	Schedule of changes in working capital is prepared on the basis of current assets and current liabilities.	Funds flow statement is prepared on the basis of Fixed Assets and Fixed Liabilities.
Contents	Schedule of changes in working capital is prepared only with the help of two Balance sheets.	Funds flow statement is prepared with the help of two balance sheets, profit & loss account and other additional information etc.

Funds from Operation

Q. What is meant by funds from operation? How is it determined ?

Funds from Operation = Net Sales – Cost of goods sold – Operating Expenses.

Funds from operation means Operating Profit, which is calculated after deducting cost of goods sold and operating expenses from the amount of net sales.

Funds from Operation may also be calculated in the following manner:

	Rs.
Net Profit (for the current year)	XXX
Add: Non-cash and non-operating items like	
Depreciation	XXX
Profit transfer to General Reserve/other Reserves	XXX
Profit transfer to Sinking Fund/other Funds	XXX
Provisions made during the year (Except provision on debtors)	XXX
Loss on sale of Investment	XXX
Loss on sale of Fixed Assets	XXX
Proposed Dividend	XXX
Interim Dividend	XXX
Premium on Redemption of Preference Shares/Debentures	XXX
Writing off:	XXX

Goodwill	XXX
Preliminary Expenses	XXX
Discount on issue of shares and debentures	XXX
Patent Right/Copy Right/Trade Marks	XXX
Underwriting Commission	XXX
	XXX
Less: Non-cash and non-operating incomes like	
Gain on sale of Investment	XXX
Gain on sale of Fixed Assets	XXX
Appreciation	XXX
Rent from Tenants	XXX
Interest/Dividend received	XXX
Refund of Tax	XXX
Excess provision written back etc.	XXX
	XXX
Funds From Operation	**XXX**

Working Capital: Schedule

Q. How is schedule of changes in working capital prepared?

Schedule of changes in working capital is prepared on the basis of current assets and current liabilities given in the balance sheet for two years. It is prepared in the following manner:

Particulars	Previous Year Rs.	Current Year Rs.	Increase Rs.	Decrease Rs.
Current Assets:				
Cash in hand	XXX	XXX		
Cash at Bank	XXX	XXX		
Bills Receivable	XXX	XXX		
Sundry Debtors	XXX	XXX		
Stock	XXX	XXX		
Accrued Income	XXX	XXX		
Marketable Securities	XXX	XXX		
Prepaid Expenses	XXX	XXX		
	XXX	**XXX**		
Current Liabilities:				
Sundry Creditors	XXX	XXX		
Bills Payable	XXX	XXX		
Bank Overdraft	XXX	XXX		
Outstanding Expenses	XXX	XXX		
Amounts received in advance	XXX	XXX		
	XXX	**XXX**		
Working Capital (CA – CL)				
Net increase/decrease in working capital				
	XXX	**XXX**	**XXX**	**XXX**

Increase in the amount of current asset will be shown in the increase column and decrease in the amount of current assets will be shown in decrease column. Decrease in the amount of current liabilities will be shown in the increase column and increase in the amount of current liabilities will be shown in the decrease column.

If the total of increase column is more than that of the decrease column, net result will be net increase in working capital and if the total of decrease column is more than that of the increase column, result will be net decrease in working capital.

UNDERSTANDING AND CLASSIFYING COSTS

This chapter will familiarize you with the process of determination of costs, particularly in a manufacturing concern. Moreover, it will explain how the costing techinques are useful in the process of managerial decision making.

Cost Accounting: Introduction

Q. What do you understand by cost accounting? State its objectives. (June 03)
OR
Q. Write a short note on Cost accounting. (Dec. 01)

Cost accounting is concerned with the application of costing principles, methods and techniques for ascertaining the costs with a view to controlling them and assessing the profitability and efficiency of the enterprise.

In the initial stages cost accounting was merely considered to be a technique for ascertainment of costs of products or services on the basis of historical data. In course of time it was realized, due to competitive nature of the market, that ascertaining of cost was not so important as controlling costs was. Hence, cost accounting started to be considered more as a technique for cost control rather than as a technique merely for cost ascertainment.

The objectives of cost accounting are:

- Ascertaining the costs
- Controlling the costs
- Reducing the costs

Classification of Costs

Q. Explain the meaning of:

i. Fixed Cost
ii. Shut Down Costs
iii. Sunk Costs
iv. Opportunity Cost (Dec. 99, June 01, June 02)
v. Controllable Costs
vi. Uncontrollable Costs
vii. Variable Cost
viii. Imputed or Hypothetical Costs (June 00)

Fixed Cost
These are the costs which remain constants irrespective of the quantum of output within and up to the capacity that has been built up. Examples of such costs are: rent, insurance charges, management salary etc.

Fixed Cost is divided into
(i) committed fixed costs and
(ii) discretionary fixed costs.

1. Committed Fixed Costs: This consists largely of those fixed costs that arise from the possession of plant, equipment and a basic organizational structure. For example, once a building is constructed and plant is installed noting much can be done to reduce the costs such as depreciation, property taxes, insurance and salaries of the key personnel etc., without impairing the organization's competence to meet the long-term goals.

2. Discretionary Fixed Costs: These are those costs, which are set at fixed amount for specific time periods by the management in the budgeting process. These costs directly reflect top management policies and have no particular relationship with volume of output. These costs can therefore be reduced or eliminated entirely, if the circumstances so require.
Examples of such costs are: research and development costs, advertising and sales promotion costs, donations, management consulting fees, etc. these costs are also termed as managed or programmed costs.

Shut Down Cost
Those costs which continue to be incurred even when a plant is temporarily shut-down, e.g. rent, rates, depreciation, etc. these costs cannot be eliminated with the closure of the plant. In other words, all fixed costs, which cannot be avoided during the temporary closure of a plant, will be known as shut down costs.

Sunk Costs
Historical costs incurred in the past are known as sunk costs. They play no role in decision making in the current period. For example, in the case of a decision relating to the replacement of a machine the written down value of the existing machine is a sunk cost and therefore, not considered.

Opportunity Cost (June 01, June 02)
This cost refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action. For example, a firm financing its expansion plans by withdrawing money from its bank deposits. In such a case the lots of interest on the bank deposit is the opportunity cost for carrying out the expansion plant.

Another example is if an owned building is proposed to be utilized for housing a new project plant, the likely revenue which the building could fetch, if rented out, is the opportunity cost.

Controllable Costs
These are costs, which can be influenced by the action of a specified member of an organization. For example, the foreman of a production department can control the utilization of power or raw material in his department. These are, therefore, controllable costs as far as he is concerned.

Uncontrollable Costs
These are costs that cannot be influenced by the action of a specified member of an undertaking. For example, the foreman of a production department can control the wastage of power in his department, but he cannot control the power, which is being wasted in the powerhouse itself resulting in higher cost per unit of power to him.

Variable Costs
Variable costs tend to vary with the volume of output. Any increase in the volume of production result in an increase in the variable cost and vice-versa. For example, cost of material; cost of labor, etc.

Imputed or Hypothetical Costs (June 00)
These types of costs are not recorded in the books of accounts. These costs are not actually incurred but are considered while making a decision. For example, in accounting, interest and rent are recognized only as expenditure when they are actually paid. But in costing they are charged on a notional basis while ascertaining the cost of a product.

Cost Sheet
Q. What is a Cost Sheet? How it is prepared? (Jan. 01)

A Cost Statement or Cost Sheet is "a document which provides for the assembly of the detailed Cost of a Cost Center or Cost Unit".

It is a detailed statement depicting the subdivision of cost arranged in a logical order under different heads.

The main advantages of a Cost Sheet are as follows:

1. It provides the total cost figure as well as cost per unit of production..
2. It helps in cost comparison.
3. It facilitates the preparation of cost estimates required for submitting tenders.
4. It provides sufficient help in arriving at the figure of selling price.
5. It facilitates cost control by disclosing operational efficiency.

Specimen of Cost Sheet or Statement of Cost

	Total Cost Rs.	**Cost Per Unit Rs.**
Direct materials	--------------	-------------
Direct labour	-----------	------------
Direct expenses	------------	----------
Prime Cost		
Add: Works overheads	-----------	-----------
Works cost/Factory cost	-------------	------------
Add: Administration	-----------	-----------
Overheads	-------------	-------------
Cost of production		
Add: Selling and	----------	--------------
distribution	-----------	------------
overheads	-----------	----------
Cost of sales		

Treatment of stock of raw materials, work-In-progress and finished goods while preparing a Cost Sheet

Stock of raw material:
If the figures of opening stock of raw materials, purchases of raw materials and closing stock of raw materials are given, then the figure of raw material consumed (direct material) can be calculated as below:

Particulars	**Rs.**
Opening stock of raw materials	-----------------
Add: Purchases of raw materials	--------------------
Less: Closing Stock of raw materials	------------------
Raw materials consumed	-----------------------

Work-in-Progress:
Work-in-progress represents those units on which some work has been done but which are not yet complete. It is valued at works cost or prime cost basis, but the former is

preferred when work-in-progress is valued at works or factory cost then opening and closing stock will be adjusted as below:

Particulars	Rs.
Prime Cost.	------------
Add : Factory Overheads	------------
Add : Opening work in progress	-------------
Less: Closing work in progress	--------------
Works cost	========

Finished goods:

When the opening arid closing figures of finished goods are given, the same may be adjusted before calculating cost of goods sold as under:

Particulars	**Rs**.
Cost of production	
Add: Opening stock of finished goods	
Less: Closing stock of finished goods	
Cost of Goods Sold	

ACCOUNTING INFORMATION AND ITS APPLICATIONS

Absorption and marginal costing

The cost of a product can be ascertained (using the different elements of cost) by Absorption or Marginal costing. In this chapter, we will discuss about the techniques of Absorption & Marginal costing.

Moreover, you will see that Marginal costing has an edge over Absorption costing as far as managerial decision making is concerned.

Short Notes

Q. Explain the meaning of:

1. Absorption Costing
2. Marginal Costing (Dec. 98, June 00, Jan. 01)
3. Break Even Point (Dec. 99, June 02)
4. Marginal Cost

Absorption Costing
Absorption Costing technique is also termed as Traditional or Full Cost Method. According to this method, the cost of a product is determined after considering both fixed and variable costs. The variable costs, such as those of direct materials, direct labor, etc. are directly charged to the products, while the fixed costs are apportioned on a suitable basis over different product manufactured during a period. Thus, in case of Absorption Costing all costs are identified with the manufactured products.

This system of costing has a number of disadvantages:

i. It assumes prices are simply a function of costs.
ii. It does not take account of demand.
iii. It includes past costs that may not be relevant to the pricing decision at hand.
iv. It does not provide information that aids decision making in a rapidly changing market environment.

Thus, the technique of Absorption Costing may lead to rather odd results particularly for seasonal businesses in which the stock level fluctuate widely from one period to another. The transfer of overheads in and out of stock will influence their profits for the two periods, showing falling profits when the sales are high and increasing profits when the sales are low.

The technique of Absorption Costing may also lead to the rejection of profitable business. The total unit cost will tent to be regarded as the lowest possible selling price. An order at a price, which is less than the total unit cost may be refused though this order, may actually be profitable.

Marginal Costing (Dec. 98, June 00, Jan. 01)
Marginal costing is a special technique used for managerial decision making. The technique of marginal costing is used to provide a basis for the interpretation of cost data to measure the profitability of different products, processes and cost centers in the course of decision making. It can, therefore, be used in conjunction with the different methods of costing such as job costing, process costing etc., or even with other techniques such as standard costing or budgetary control.
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In marginal costing, cost ascertainment is made on the basis of the nature of cost. It gives consideration to behaviour of costs. In other words, the technique has developed from a particular conception and expression of the nature and behaviour of costs and their effect upon the profitability of an undertaking.

In the orthodox or total cost method, as opposed to marginal costing method, the classification of costs is based on functional basis. Under this method the total cost is the sum total of the cost of direct material, direct labor, direct expenses, manufacturing overheads, administration overheads, selling and distribution overheads. In this system, other things being equal, the total cost per unit will remain constant only when the level of output or mixture is the same from period to period. Since these factors are continuously fluctuating, the actual total cost will vary from one period to another. Thus, it is possible for the costing department to say one day that a thing costs Rs. 20 and next day it costs Rs. 18. This situation arises because of changes in volume of output and the peculiar behaviour of fixed expenses comprised in the total cost. Such fluctuating manufacturing activity, and consequently the variations in the total cost from period to period or even from day to day, poses a serious problem to the management in taking sound decisions. Hence, the application of marginal costing has been given wide recognition in the field of decision making.

Break Even Point (Dev 99, June 02)
The break-even point is the point or state of a business at which there is neither a profit nor a loss. In other words, it is at this point where the contribution is equal to fixed expenses.

Cash break-even point:
While computing the break even point if only cash fixed costs are considered, the break even point so computed is called cash break-even point. The computation of cash break-even-point excludes depreciation and other non-cash fixed expenses. Cash break-even point thus will give such a level of output or sales at which the sales revenue will be equal to cash outflow.

Cash break-even point = Cash fixed costs / Contribution per unit

Composite break-even point:
It is a single break-even point in the case of firms manufacturing two or more products. Composite break-even point is determined by dividing the total fixed costs by composite P/V ratio.

The composite P/V ratio can be calculated by dividing the total contribution by total sales and multiplying by 100.

Composite break-even point. = Total fixed costs/Composite P/V ratio

Composite P/V ratio = (Total contribution/Total Sales) x 100

Cost-break-even point:
It is a situation under which the costs of operating two alternative plants are equal. Though both the plants may have the same total costs, their total fixed costs and variable costs per unit may be different. In such a case, the firm may like to determine that point at which the total costs (fixed and variable) of operating both the plants are same. Such a point may be called ‘cost break even point’.

Cost break even point = Difference in fixed cost / Difference in variable cost per unit

Alternatively:

The Cost break even point can also be determined by solving the following relation for the value of X.

Cost break even point
= Fixed cost of plant 1 + [Variable cost per unit of plant 1 x X]
= Fixed cost of plant 2 + [Variable cost per unit of plant 2 x X]
'X' in the above relation represents cost break even point

Marginal Cost
The technique of marginal costing is concerned with marginal cost. The Institute of Cost and Management Accountants, London, has defined Marginal Cost as "the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit".

Therefore, Marginal Cost refers to increase or decrease in the amount of cost on account of increase or decrease of production by a single unit. The unit may be a single article or a batch of similar articles. Marginal Cost ordinarily is equal to the increase in total variable cost because within the existing production capacity an increase of one unit in production will cause an increase in variable cost only. The variable cost consists of direct materials, direct labor, variable direct expenses and variable overheads.

The accountant's concept of marginal cost is different from the economist's concept of marginal cost. According to economists, the cost of producing one additional unit of output is the marginal cost of production. This shall include an element of fixed cost also. Thus, fixed cost is taken into consideration according to the economist's concept of marginal cost, but not according to the accountant's concept. Moreover with additional production the economist's marginal cost per unit may not be uniform since the law of diminishing (or increasing) returns may be applicable, while the accountant's marginal cost in taken as constant per unit of output with additional production.

Absorption & Marginal Costing

Utility of Marginal Costing

Q. Examine the relevance of marginal costing in the present say context of global business environment, with suitable illustrations, comparing it with other techniques. (June 02)

Marginal costing is a special technique used for managerial decision making. The technique of marginal costing is used to provide a basis for the interpretation of cost data to measure the profitability of different products, processes and cost centers in the course of decision making. It can, therefore, be used in conjunction with the different methods of costing such as job costing, process costing etc., or even with other techniques such as standard costing or budgetary control. The technique of marginal costing has become

more relevant and useful in today's business environment of globalization. This is because in marginal costing the cost of a product, or a service is computed only on the basis of variable costs. Global companies want to take advantage of cheap labour in developing or backward countries.
Marginal costing techniques helps management in several ways in the present day context of global business environment.

These are listed below:

- Volume of production: Marginal costing helps in determining the level of output which is most profitable for running concern. The production capacity, therefore, can be utilized to the maximum possible extent. It helps in determining the most profitable relationship between cost, price, and volume in the business which helps the management in fixing best selling prices for its products.

- Selecting product lines: The marginal costing technique helps in determining the most profitable production line by comparing the profitability of different products.

- Produce or procure: The decision whether a particular product should be manufactured in the factory or procured from outside source can be taken comparing the price at which it can be had from outside. In case the procurement price is lower than the marginal cost of production, it will be advisable to procure the product from outside source.

- Method of manufacturing: If a product can be manufactured by two or more methods, ascertaining the marginal cost of manufacturing the product by each method will be helpful in deciding as to which method should be adopted.

- Shut down or continue: marginal costing, particularly in the times of depression, helps in deciding whether the production in the plant should be suspended temporarily or continued in spite of low demand for the firm's products.

Comparison of Marginal & Absorption Costing

Absorption Costing technique is also termed as Traditional or Full Cost Method. According to this method, the cost of a product is determined after considering both fixed and variable costs. In marginal costing only variable costs are charged to production. Fixed costs are ignored. Following are differences between them.

- Recovery of Overhead: In absorption costing both fixed & variable overheads are charged to production. In contrary to this, in marginal costing only variable overheads are charged to production. Thus, in marginal costing there is under recovery of overheads.

- Valuation of stocks: In absorption costing, stocks of work in progress and finished goods are valued at works cost & total cost. In marginal costing, only variable cost is considered while computing the value of work in progress or finished products. Thus, closing stock in marginal costing is under valued as compared to absorption costing.

Advantages & Limitations

Q. What are the advantages and limitations of Marginal Costing?

Advantages:

1) The marginal cost remains constant per unit of output whereas the fixed cost remains constant in total. Since marginal cost per unit is constant from period to period within a short span of time, firm decisions on pricing policy can be taken. If fixed cost is included, the unit cost will change from day to day depending upon the volume of output. This will make decision-making task difficult.

2) Overheads are recovered in marginal costing on the basis of pre-determined rates. If fixed overheads are included on the basis of pre-determined rates, there will be under-recovery of overheads if production is less or if overheads are more. There will be over-recovery of overheads if production is more than the budget or actual expenses are less than the estimate. This creates the problem of treatment of such under or over-recovery. Marginal costing avoids such under or over-recovery of overheads.

3) Advocates of marginal costing argue that under the marginal costing technique, the stock of finished goods and work in progress are carried on marginal cost basis and the fixed expenses are written off to profit and loss account as period costs. This shows the true profit of the period.

4) Marginal costing helps in carrying out break-even analysis, which shows the effect of increasing or decreasing production activity on the profitability of the company.

5) Segregation of expenses as fixed and variable helps the management to exercise control over expenditure. The management can compare the actual variable expenses with the budgeted variable expenses and take corrective action through analysis of variances.

6) Marginal costing helps the management in taking a number of business decisions like make or buy, discontinuance of a particular product, replacement of machines, etc.

Limitations:

1) It is difficult to classify costs exactly into fixed and variable. Most of the expenses are neither totally variable nor wholly fixed.

2) Contribution itself is not a guide unless it is linked with the key factor.

3) Sales staff may mistake marginal cost for total cost and sell at a price, which will result in loss or low profits. Hence, sales staff should be cautioned while giving marginal cost.

4) Overheads of fixed nature cannot altogether be excluded particularly in large contracts while valuing the work-in-progress. In order to show the correct position fixed over heads should be included in work-in-progress.

5) Some of the assumptions regarding the behaviour of various costs etc., are not necessarily true in a realistic situation. For example, the assumption that fixed cost will remain static throughout is not correct.

Direct from link:

Absorption & Marginal Costing

Practical Problems

Q. Rajkumar Ltd. provides you the following information: (June 03)

	Sales (Rs.)	Profit (Rs.)
Period 1	10,000	2,000
Period 2	15,000	4,000

You are required to calculate:

P/V ratio
Fixed cost
Break-even sales volume
Sales to earn a profit of Rs. 3,000 and
Profit when sales are Rs. 8,000

Solution

i)

$$\text{P/V ratio} = \frac{\text{Change in profit}}{\text{Change in rate}} \times 100$$

$$= \frac{2000}{5000} \times 100 = 40\%$$

ii)

Fixed Cost = Contribution - Profit

$$= \frac{10000}{100} \times 40 - 2000 = 2000$$

iii)

$$\text{Break-even sales volume} = \frac{\text{Fixed Cost}}{\text{P/V ratio}}$$

$$= \frac{2000}{40} \text{ X } 100$$

= 5000

iv)

$$\text{Sales} = \frac{\text{Fixed cost + Profit}}{\text{P/V ratio}}$$

$$\text{Sales} = \frac{2000 + 3000}{40\%}$$

= 12500

v)

Profit = Sales - Variable cost - Fixed cost
Variable cost = 8000 x (60/100) = 4800
Profit = 8000 - 4800 - 2000 = 1200

Q. From the following information relating to Smith sons, calculate the break-even point and the turnover required to earn a profit of Rs. 3,00,000 (Dec. 02)

Fixed Overhead = 2,10,000 (total)
Variable Cost = 20 per unit

If the company is earning a profit of Rs. 3,00,000, what is the margin of safety available to it? Also state the significance of this margin.

Solution

Selling price	= 50
Less variable cost	= 20
Contribution	= 30

$$\text{BEP in units} = \frac{\text{Fixed cost}}{\text{Contribution per unit}}$$

$$= \frac{2,10,000}{30} = 7,000 \text{ units}$$

$$\text{BEP in amount} = \frac{2,10,000}{60\%} = 3,50,000$$

Calculation of turnover to earn a profit of Rs. 3,00,000

$$\text{Sales} = \frac{\text{Fixed cost + Desired Profit}}{\text{Contribution per unit}}$$

$$= \frac{21,000 + 3,00,000}{30}$$

= 17000 units

$$\text{Sales (amount)} = \frac{\text{Fixed cost + Desired Profit}}{\text{P/V ratio}}$$

$$= \frac{21,000 + 3,00,000}{60\%}$$

= 8,50,000

Margin of Safety

Margin of safety = Total sales - sales at BEP
MOS (Amount) = 850000 - 350000 = 500000
MOS (Units) = 17000 - 7000 = 10000 units

> For theory part please refer to chapter 9.

Q. Premier Ltd. produces a standard article. The results of the last four quarters of the year 2000 are as follows: (Dec. 01)

Quarters	Output (unit)
I	1,000
II	1,500
III	2,000
IV	3,000

The cost of direct material is Rs. 30 and direct labour is Rs. 20 per unit. Variable expenses are Rs 10 per unit. Fixed expenses are Rs 6,000 per annum. (i) Find out full cost percent for each quarter. (ii) Find out BEP (Break Even Point) in units for each quarter if selling price is Rs 100 per unit and the entire output is sold.

Solution

	I	II	III	IV
Output	1000	1500	2000	3000
Direct material Rs. 30	30000	45000	60000	90000
Direct Labour Rs. 20	20000	30000	40000	60000
Variable Expenses Rs. 10	10000	15000	20000	30000
Fixed Expenses	1500	1500	1500	1500

Annual expenses = 6000
Quaterly expense = 6000/4 = 1500

i) Full cost percent for each quarter

Total	61500	91500	121500	181500
Percentage	13.5	20	26.7	39.80

ii) BEP in units

BEP = Fixed cost/ contribution per unit

Contribution = Sales - Variable cost
= 100 - (30 + 20 + 10)
= 40

BEP = 6000/40 = 150 units

Q. From the following data : (June 01)

Selling Price = Rs. 40 per unit
Variable manufacturing cost = Rs. 20 per unit
Variable selling cost = Rs. 10 per unit
Fixed factory overheads = 10,00,000 per year
Fixed selling costs 4,00,000 per year

Calculate : i) Break-even point expressed in rupee sales. ii) Number of units that must be sold to earn a profit of Rs. 2,00,000 per year.

Solution

i)

Contribution = Sales - variable cost
= 40 - (20 + 10)
= 10

Total fixed cost = Fixed factory overheads + Fixed selling cost
= 10,00,000 + 4,00,000 = 14,00,000

$$\text{BEP in units} = \frac{\text{Fixed cost}}{\text{Contribution per unit}}$$

$$= \frac{14,00,000}{10}$$

= 1,40,000 units

BEP (Value) = Fixed cost/(P/V ratio)

$$\text{P/V ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

= 10/40 X 100 = 25%

BEP (value) = (14,00,000/25) X 100
= 56,00,000

ii) Number of units must be sold to earn a profit of Rs. 2,00,000 per year

$$\text{Sales} = \frac{\text{Fixed cost + Desired Profit}}{\text{P/V ratio}}$$

= (14,00,000 + 2,00,000) / 25%
= 64,00,000

Q. A medical advisory service offers to its subscribers complete information on doctors, paramedicals, health insurance, super speciality hospitals and general health awareness.

20 per request. Under plan B, a computer system would be leased for Rs. 10 lakhs per year and the subscriber requests would be processed with a variable cost of Rs. 120 per request. Under either option, the subscriber can and is happy to pay Rs 220 per request that is processed. On the basis of this data
(i) Which option is more risky?
(ii) Draw break even charts for both options.
(iii) At what volume of business would the operating profit under either option be the same?
(iv) Which plan has a higher degree of operating leverage?

(Jan. 01)

Solution

(i)

PLAN A

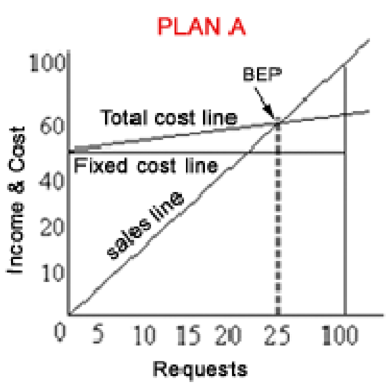
BEP (units) = Fixed costs/contribution per unit
= 50,00,000/(220 - 20)
= 25,000 requests

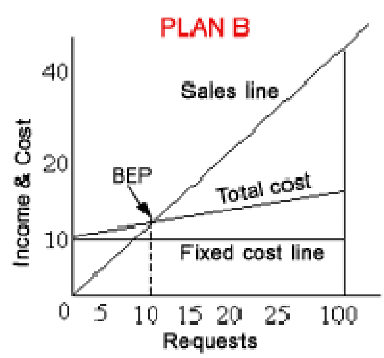
PLAN B

BEP (units) = Fixed costs/contribution per unit
= 10,00,000/(220 - 120)
= 10,000 requests

Plan is more risky because initial fixed cost is very high. If sales fall below 25,000 requests, losses will be incurred.

(ii) Break even chart





iii) Profit under plan A = (Price - Varaible cost) X Units - FC
= (220 - 20) X (x) - 50,00,000

Profit under plan B = (220 - 120) X (x) - 10,00,000

Equating both the equations we get

(220 - 20) X (x) - 50,00,000 = (220 - 120) X (x) - 10,00,000
100x = 40,00,000
x = 40,000 requests

iv) Operating Leverage

Degree of operating leverage = %change in net operating income / % change in units sold or sales
= Contribution/EBIT

Where EBIT is Earning before interest & tax

In both the plans the contribution is calculated taking hypothetical data of 50,000 requests because the question does not provide any information.

PLAN A

$$= \frac{50000 \text{ X } (\text{Rs. } 220 - \text{Rs. } 20)}{50000 \text{ X } (220 - 20) - \text{Rs. } 50,00,000}$$

= 2

PLAN B

$$= \frac{50000 \text{ X } (\text{Rs. } 220 - \text{Rs. } 120)}{50000 \text{ X } (220 - 120) - \text{Rs. } 10,00,000}$$

= 1.25

Plan A has greater operating leverage owing to higher fixed costs.

COST – VOLUME - ANALYSIS

INRODUCTION:

Cost Volume profit analysis provides a framework within which the impact of volume changes in the short-run may be examined on profit. Cost behaviour is added as a dimension and corresponding changes in profit, break-even point, and margin of safety are observed.

Managers have to take frequent decisions which involve considerations of selling prices, variable costs, and fixed costs. Many of these decisions are a part of their planning responsibilities and have to be based on predictions about costs & revenues. The CVP relationship acquires a vital significance for the manager facing a wide spectrum of short-run decisions.

Cost-Volume-Profit Analysis

CVP Analysis

Q. What is CVP Analysis? (June 00)

Profit is the most important measure of the firm's performance. In the free-market economy, profit is a guide for allocating resources efficiently. An analysis of the effects of various factors on profits is an essential step in the financial planning and decision-making.

The analytical technique used to study the behaviour of profit in response to the changes in volume, costs and prices is called the cost-volume-profit (CVP) analysis. It is a device used to determine the usefulness of the profit planning process of the firm. In fact, the entire field of profit planning has become associated with the CVP inter-relationships. However, it should be noted that' the formal profit planning and control also involves the use of budgets and other forecasts. As a starting point in the profit planning, CVP analysis helps to determine the minimum sales volume to avoid losses and the sales volume at which the profit goal of the rum will be achieved. As an ultimate objective, it helps management in seeking the most profitable combination of costs and volume. A dynamic management, therefore, uses CVP analysis to predict and evaluate the implications of its short-run decisions about fixed costs, variable costs, volume and selling price for its profit plans on a continuous basis. Generally, CVP analysis provides answers to questions such as:

1. What minimum level of sales need be achieved to avoid losses?
2. What should be the sales level to earn a target profit?
3. What will be the effect of changes in prices, costs and volume on profits?
4. How will profits be affected when sales mix is changed?
5. What will be new break-even point under (3) and (4) above?
6. What will be the impact of plant expansion on cost-volume-profit relationships?
7. Which product is the most profitable and which one is the least profitable?
8. Should sale of a product or operation of a plant be discontinued?

9. Should the firm be shut down temporarily?

The CVP analysis is of immense utility to management as it provides an insight into the effects and inter-relationship of factors, which influence profits of the firm. It is with the help of the CVP analysis that the finance executive is enabled to present facts and figures in accurate reports and intelligible charts to management for action.

Margin of safety

Q. Explain briefly the meaning of Margin of Safety. (June 01)

The margin of safety represents the difference between the sales at break-even point and the total sales. It can be expressed as a percentage as well as in value. The size of the margin of safety shows the strength of the business. If the margin of safety is small, it may indicate that the firm has large fixed expenses and is more vulnerable to changes in sales. In other words, if the margin of safety is large a slight fall in sales may not affect the business very much but if it small even a slight fall in sales may adversely affect the business.
The margin of safety can be calculated as:

Profit x Sales / Contribution
Or
Profit / (P/V ratio)

The possible steps to improve the margin of safety are:

1. Increase in the selling price, provided the demand is inelastic so as to absorb the increased prices.
2. Reduction in fixed expenses.
3. Reduction in variable expenses.
4. Increasing the sales volume provided capacity is available.
5. Substitution or introductions of a product mix such that more profitable lines are introduced.

VARIANCE ANALYSIS

Profitability of a business enterprise depends basically on two factors: costs and sales. The efforts of the management should be to minimize the cost without compromising on the quality and pushing up the sales of the products. This requires proper monitoring of both costs & sales performances. Targets have to be fixed and the actual results should be compared with the pre-determined targets and variance found out.

Variance refers to the difference between the standard (or budgeted performance) and actual performance. Variance analysis is mainly concerned with ascertaining the quantum of variances together with the analysis of the causes responsible for such variances.

Variance Analysis

Q. What is variance in the context of financial management? Why are the variance computed? How can the variance be controlled? Why tools would be appropriate for computerizing these activities for use in management decision making?

A Variance is the difference between the actual cost and standard cost. If the effect of the variance is to increase the profit, the variance is said to be favorable. In the reverse case, it is adverse or unfavorable.

Variances are of two categories, those relating to quantities which are the result of efficiency or inefficiency in the use of material, labour etc., and those relating to price or rates.

The first mentioned category of variance is calculated as follows:

Standard rates x Difference between actual and standard quantities.

The second type of variance is calculated as follows:

Actual quantities x Difference between actual and standard prices.

The variances may be classified into two categories:

1. Cost Variances
2. Sales Variances

COST VARIANCES

1. Materials Variances

Name	**Significance**	**How it is calculated?**
(i) Materials cost variance	It shows the difference between the standard cost of direct material specified for the production achieved, whether completed or not and the actual cost of materials used.	Difference between standard cost and actual cost for actual output. Here standard cost means standard cost of materials for actual output.
(ii) Materials price variance	Showing excess amount spent or the amount saved due to a change in price.	Actual quantity x Difference between actual and standard price.
(iii) Materials usage variance	Showing to what extent there is wastage or saving in use of materials.	Standard price x Difference between actual and standard quantities of material.

(iv) Materials mix variance	Showing the difference because of a change in the proportion of various materials used.	Total actual quantity x Difference between the standard cost per unit of the standard mix and the standard cost per unit of the actual mix.
(v) Materials yield variance	Showing the difference between the actual output and the output which should have resulted from actual input.	Standard rate of yield x Difference between standard yield and actual yield.

Labour variances: These are similar to material variances.

Name	Significance	How it is calculated?
1. Labour Cost Variance	It shows the difference between the standard wages specified for the actual production, whether completed or not, and the actual direct wages incurred.	Difference between the standard cost of standard hours for actual output and actual labour cost.
2. Wage rate variance	Showing the difference made to the wages spent because of a change in wage rates.	Actual number of hours x Difference between the actual and standard wage rates.
3. Labour idle time variance	Loss due to the idle time (abnormal)	Abnormal idle time x Standard wage rates.
4. Labour efficiency variance	Loss or saving due to changes in the level of efficiency.	Standard wage rate x Difference between the actual time spent (deducting abnormal idle time, if any) and standard time.
5. Labour mix variance	Difference made to the total wages spent due to a change in the proportion of various skills of labour	Actual time x Difference between standard wage cost per unit of standard mix and standard wage cost per unit of actual mix.

Overhead variances

Overhead variances arise due to the difference between actual overheads and absorbed overheads. Thus if we have to calculate an overhead variance, we have to know the amount of the actual overheads and that of absorbed overheads.

The actual overheads can be known only at the end of the accounting period, when the expense accounts are finalised. The absorbed overheads are the overhead charged to each unit of production on the basis of a pre-determined overhead rate. This predetermined overhead rate is also known as standard overhead recovery rate, standard overhead absorption rate or standard overhead burden rate. To calculate the standard overhead recovery rate, we have to first make as estimate of the likely overhead expenses for each department for the next year. The estimate of budget of the overheads to be divided into fixed and variable elements. An estimate of the level of normal capacity utilisation is then made either in terms of production or machine hours or direct labour hours. The estimated capacity level to calculate the pre-determined overhead absorption rate as shown below divides the estimated overheads:

Standard Fixed Overhead Rate = Budgeted Fixed Overheads/Normal Volume

Standard Variance Overhead Rate = Budgeted Variable Overheads/Normal Volume

The Sales variances can be computed in the two following ways:

1. Sales turnover or value method
2. Profit of sales margin method

Sales turnover or sales value method
In the sales turnover or sales value method, the variances are computed on the basis of sales value. This method will give the sales manager an idea of the effect of various factors affecting sales such as prices, quantity and sales mix on the overall sales value.

The sales value variances are more or less similar to material cost variances or labour cost variances.

1. Firstly, the total sales value variance is to be calculated. Obviously, this is the difference between the actual sales and budgeted sales. The variance can be bifurcated into sales price variance and sales volume variance.

2. Sales price variance can be calculated as below:

Actual quantity X (Actual price - Budgeted price) or Actual sales minus actual quantity at budgeted price.

3. Sales volume variance can be calculated by the following formula:

Budgeted price X (Actual quantity - Budgeted quantity) or Actual quantity at budgeted price minus budgeted sales.

As in the case of materials, the sales volume variance can be bifurcated into sales mix variance and sales quantity variance. The former shows the difference in sales value due to the fact that the actual sales mix is different from what was expected as the budgeted mix. The latter shows the effect of total quantity being larger or smaller than what was budgeted.

For calculating the sales mix variance, we have to calculate the average budgeted price per unit of budgeted mix and the budgeted price per unit of actual mix.

The sales mix variance can then be calculated as below:

Actual quantity x (Budgeted price per unit of budgeted mix minus Budgeted price per unit of actual mix)

The sales quantity variance can be calculated as below:

Budgeted price per unit of budgeted mix x (Budget total qty. - Actual total qty.)

Profit or sales margin method –
The purpose of measuring the variances under this method is to identify the effect of changes in sale quantities or selling prices on the profits of the company. The quantity and mix variances should be analyzed in conjunction with each other because the sales management is responsible for both these variances. Where a company is engaged in the manufacture and sale of multiple products, the variances between budgeted sales and actual sales' may arise due to the following reasons:

(a) Changes in unit price and cost.
(b) Changes in the physical volume of each product sold. This is quantity variance.
(c) Changes in the physical volume of the more profitable or; less profitable products. This is mix variance.

There are five distinct variables that can cause actual performance to differ from budgeted performance. They are:

(a) Direct substitution of products.
(b) Actual quantity of the constituents of sales is different from the budgeted quantity.
(c) Actual total quantity being different from budgeted total quantity.
(d) Difference between actual and budgeted unit cost.
(e) Difference between actual and budgeted unit sale price.

The sales management should consider particularly the interaction of more than one variable in making decisions. For example, decrease in selling price coupled with a favorable product quantity variance may help to assess the price elasticity of demand. The formulae for the calculation of sales margin variances are as under:

(a) **Total sales margin variance (TSMV):**
It is the difference between the standard margin and the actual margin.

(b) **Sales margin price variance (SMPV):**
This variance arises because of the difference between the standard price of the quantity actually sold and the actual price thereof.

SMPV = Actual quantity X (Std. margin per unit - Actual margin per unit).

(c) **Sales margin volume variance (SMVV):**

This variance arises because of the difference between the budgeted and actual quantities of each product both evaluated at standard margin.

SMVV = Std. margin per unit X (Budgeted units - Actual units sold)

This can be further sub-divided into the following two variances:

(d) **Sales margin quantity variance (SMQV):**
This variance arises because of the difference between the budgeted quantity and the actual quantity and is ascertained by multiplying this difference by standard margin per unit of standard mix.

(e) **Sales margin mix variance (SMMV):**
This variance arises because of the change in the quantities of actual sales mix from budgeted sales mix and can be computed as below: .

SMMV = Total actual quantity sold X (Standard margin per unit of standard mix Standard margin per unit of actual mix)

OBJECTIVE OF COMPUTATION OF VARIANCE

As we all know that profit making is the prime objective of a business enterprise, which depends basically on two factors i.e. Costs and Sales. In order to achieve better performance, it is necessary that a business lay down target in respect of both of them. Variance analysis is intimately connected with budgetary control that helps the management in:

a. Planning future activities
b. Comparing actual performance with the budgeted performance
c. Identifying the variances as to their causes
d. Ensuring that remedial measures are taken at appropriate time.

CONTROL OF VARIANCES

After the variances have been computed and analyzed, the next logical step for the management is to trace the responsibility for the variances to particular individuals or departments. The Management/Cost Accountant may be required to prepare necessary report for this purpose. The report submitted to the management should clearly indicate where action is required. On the basis of this report, the management will try to identify the specific individuals for adverse controllable variances, which being within their control could have avoided. It was earlier mentioned that certain factors, such as changes in market conditions, demand and supply position, etc. are beyond the control of managers. Hence, action to pinpoint responsibility for such uncontrollable variances is not called for.
In case of controllable variances, the responsibility could be traced as shown below to the different departments for different variances:

Variance	Department to be held responsible

Materials	
Price	Purchasing Department
Quantity or Grade	Stores, Purchase or Process Department
Waste, scrap or spoilage	Production Department
Wages	
Rate – for difference in rates	Personal Department
for work requiring higher rates to pay	Production Department
Time – lack of proper supervision	Production Department
Overheads	
Volume	Sales Department
Efficiency	Production Department
Expenditure:	
Higher rates of indirect worker	Personnel Department
Higher prices of indirect materials	Purchasing Department
Higher consumption of indirect materials	Production Department
Excessive expenditure in factory	Production Department
Excessive expenditure for selling and distribution	Selling Department
Sales	
Price and Volume	Selling Department

It may be noted that variance analysis, in itself, would not help in achieving the desired objective of minimizing costs, unless managerial action is prompt and is in the right direction. The direction, of course, shall be indicated by the analysis of variances, but it is the executive side which would be responsible for taking immediate action, exercising proper control, having a close watch over operations, etc., so that economies may be effected inefficiencies minimized and performance improved. A continuous and rigorous effort in the direction of cost control would help the management to achieve the goal of standard costing.

Q. What is variance? Why are variances computed? (Jan. 01)
Please refer to the previous question for details.

Variable & Fixed Overhead Cost Variance

Q. Distinguish between variable overhead cost variance and fixed overhead cost variance. Why are such variances caused? (June 00)

VARIABLE OVERHEAD COST VARIANCE

It is the difference between standard variable overheads for actual output (or recovered variable overheads) and actual variable overheads.

VOCV = Recovered Variable Overheads – Actual Variable Overheads

Causes of Variance:
This variance may be due to advance payment of expenses, or outstanding expense or payment of past outstanding expenses during this period, or on account of certain abnormal expenses incurred such as, repairs of machinery due to breakdown, expenses due to spoilage or defective workmanship or excessive overtime work, etc.

FIXED OVERHEAD COST VARIANCE

It is the difference between standard fixed overheads for actual output (or recovered overheads) and actual fixed overheads.

FOCV = Recovered Fixed Overheads – Actual Fixed Overheads

Causes of Variance:
Difference between actual and recovered fixed overheads may be on account

i. A higher or lower amount of fixed overheads, compared to budgeted fixed overheads, might have been incurred for the same production during the same period.

ii. The same amount of fixed overheads might have been incurred for a higher or lower production that the budgeted production during the same period.

Direct Labour rate & Efficiency Variance

Q. Distinguish between direct labour rate variance and direct labour efficiency variance. What causes any lead to direct labour efficiency variance? (Dec. 01)

Direct Labour Rate (Wages) Variance: It is that portion of direct labour variance which is due to the difference between the standard or specified rate of pay and actual rate paid.

Mathematically

Direct Labour rate variance (DLRV) = Actual time x (Standard rate - Actual rate)

Direct Labour Efficiency (time) Variance:

It is that portion of the direct labour variance which is due to the difference between the standard labour hours specified for the activity achieved and the actual labour hours expended.

Mathematically

Labour Efficiency variance = Standard Rate (Standard time - Actual time)

Labour Efficiency variance may be caused due to the following:

i. Defective or bad materials.

ii. Breakdown of plant and machinery.

iii. Failure of power.

iv. Efficient working by the labourers and fuller utilization of time due to incentives given.

v. Loss of time due to delayed instructions from management or delay in receipt of raw materials.

vi. Alteration in the method of production.

vii. More time taken by workers due lack of proper supervision and control by management, making the workers lazy and inefficient.

viii. Rigid system of inspection.

ix. Poor working conditions.

x. Lower productivity due to lack of training, ability, or experience on the part of workers.
xi. Labour turnover or change-over of workers from one operation or process or department to another.

Direct Material Price & Usage Variance

Q. Distinguish between Direct Material Price Variance and Direct Material Usage Variance? What causes could lead to material usage variance? (June 01)

Direct Material Price Variance:
It is that portion of the direct material cost variance which is due to the difference between the standard price specified and the actual price paid.

Mathematically

DMPV = Actual Quantity x (Standard price- Actual price)

If the actual price is more than the standard price, the variance would be adverse and vice versa.

Direct Material Usage or Quantity Variance:
It is caused due to the difference between the standard quantity specified (for the output achieved) and the actual quantity used.

Mathematically

DMUV = Standard rate x (Standard quantity for actual output - Actual quantity)

The reasons leading to direct material usage variance are listed below:

- Inefficiency, lack of skill or faulty workmanship resulting in more consumption of raw materials.
- Improper maintenance of plant & equipment.
- Incorrect processing of materials resulting to wastage.
- Non recording of returns of material to stock.
- Improper inspection & supervision of workmen.
- Too strict supervision or inspection.
- Substitution of specified materials with unspecified materials causing greater consumption of the latter.
- Incorrect setting of standards, leading to variations.
- Excessive wastage, scrap, spoilage, leakage, etc.

(direct from link)
Practical Problems

Q. A manufacturing concern which has adopted standard costing, furnishes the following information: (Dec. 02)

Standard

Materials for 70 units of finished product = 100 kg
Price of meterial per kg = Re. 1

Actual

Output = 2,10,000 units
Materials used = 2,80,000 kg
Cost of materials = Rs. 2,52,000

Calculate material usage variance, material price variance, and material cost variance. Also state the possible causes of Material Usage Variance

Solution

	Standard	Actual
Output	2,10,000	2,10,000
Material used	(2,10,000/70) X 100 3,00,000 untis	2,80,000 kg
Cost of material		2,52,000
Price per kg	Re. 1	90 paise
Total cost of material	Rs. 3,00,000	

i) Material Usage Variance = Standard material used - Actual material used
= 3,00,000 - 2,80,000 = 20000 Kg. (favourable)

ii) Material Price Variance = Standard quantity of material X (Standard price - Actual price)
= 3,00,000 (1 - .90)
= Rs. 30,000 (favourable)

iii) Material Cost Variance = Standard cost of material - Actual cost of material
= 3,00,000 - 2,52,000
= 48,000 (favourable)

> For possible causes of material usage variance, please refer to the theory part.

CHAPTER IV. FINANCIAL AND INVESTMENT ANALYSIS

RATIO ANALYSIS

The main objectives of this chapter are to:

- provide a broad classification of ratios.
- identify ratios which are appropriate for control of activities.
- attempt a system of ratios which responds to the needs of control by management.

Meaning of Ratio Analysis

Q. What do you mean by ratio analysis? What are the advantages of such analysis? Also point out the limitations of ratio analysis.

Ratio analysis is one of the techniques of financial analysis to evaluate the financial condition and performance of a business concern. Simply, ratio means the comparison of one figure to other relevant figure or figures.

According to **Myers**, " Ratio analysis of financial statements is a study of relationship among various financial factors in a business as disclosed by a single set of statements and a study of trend of these factors as shown in a series of statements."

ADVANTAGES AND USES OF RATIO ANALYSIS

There are various groups of people who are interested in analysis of financial position of a company. They use the ratio analysis to workout a particular financial characteristic of the company in which they are interested. Ratio analysis helps the various groups in the following manner: -

1. **To workout the profitability**:
Accounting ratio help to measure the profitability of the business by calculating the various profitability ratios. It helps the management to know about the earning capacity of the business concern. In this way profitability ratios show the actual performance of the business.

2. **To workout the solvency:**
With the help of solvency ratios, solvency of the company can be measured. These ratios show the relationship between the liabilities and assets. In case external liabilities are more than that of the assets of the company, it shows the unsound position of the business. In this case the business has to make it possible to repay its loans.

3. **Helpful in analysis of financial statement:**
Ratio analysis help the outsiders just like creditors, shareholders, debenture-holders, bankers to know about the profitability and ability of the company to pay them interest and dividend etc.

4. **Helpful in comparative analysis of the performance:**
With the help of ratio analysis a company may have comparative study of its performance to the previous years. In this way company comes to know about its weak point and be able to improve them.

5. **To simplify the accounting information:**
Accounting ratios are very useful as they briefly summarise the result of detailed and complicated computations.

6. **To workout the operating efficiency:**
Ratio analysis helps to workout the operating efficiency of the company with the help of various turnover ratios. All turnover ratios are worked out to evaluate the performance of the business in utilising the resources.

7. **To workout short-term financial position:**
Ratio analysis helps to workout the short-term financial position of the company with the help of liquidity ratios. In case short-term financial position is not healthy efforts are made to improve it.

8. **Helpful for forecasting purposes:**
Accounting ratios indicate the trend of the business. The trend is useful for estimating future. With the help of previous years' ratios, estimates for future can be made. In this way these ratios provide the basis for preparing budgets and also determine future line of action.

LIMITATIONS OF RATIO ANALYSIS

In spite of many advantages, there are certain limitations of the ratio analysis techniques and they should be kept in mind while using them in interpreting financial statements. The following are the main limitations of accounting ratios:

1. **Limited Comparability:**
Different firms apply different accounting policies. Therefore the ratio of one firm can not always be compared with the ratio of other firm. Some firms may value the closing stock on LIFO basis while some other firms may value on FIFO basis. Similarly there may be difference in providing depreciation of fixed assets or certain of provision for doubtful debts etc.

2. **False Results:**
Accounting ratios are based on data drawn from accounting records. In case that data is correct, then only the ratios will be correct. For example, valuation of stock is based on very high price, the profits of the concern will be inflated and it will indicate a wrong financial position. The data therefore must be absolutely correct.

3. **Effect of Price Level Changes:**
Price level changes often make the comparison of figures difficult over a period of time. Changes in price affects the cost of production, sales and also the value of assets. Therefore, it is necessary to make proper adjustment for price-level changes before any comparison.

4. **Qualitative factors are ignored:**

Ratio analysis is a technique of quantitative analysis and thus, ignores qualitative factors, which may be important in decision making. For example, average collection period may be equal to standard credit period, but some debtors may be in the list of doubtful debts, which is not disclosed by ratio analysis.

5. **Effect of window-dressing:**
In order to cover up their bad financial position some companies resort to window dressing. They may record the accounting data according to the convenience to show the financial position of the company in a better way.

6. **Costly Technique:**
Ratio analysis is a costly technique and can be used by big business houses. Small business units are not able to afford it.

7. **Misleading Results:**
In the absence of absolute data, the result may be misleading. For example, the gross profit of two firms is 25%. Whereas the profit earned by one is just Rs. 5,000 and sales are Rs. 20,000 and profit earned by the other one is Rs. 10,00,000 and sales are Rs. 40,00,000. Even the profitability of the two firms is same but the magnitude of their business is quite different.

8. **Absence of standard university accepted terminology:**
There are no standard ratios, which are universally accepted for comparison purposes. As such, the significance of ratio analysis technique is reduced.

Accounting Ratios

Q. What is meant by accounting ratios? How are they useful?

A relationship between various accounting figures, which are connected with each other, expressed in mathematical terms, is called accounting ratios.

According to **Kennedy and Macmillan**, "The relationship of one item to another expressed in simple mathematical form is known as ratio."
Robert Anthony defines a ratio as – "simply one number expressed in terms of another."

Accounting ratios are very useful as they briefly summarise the result of detailed and complicated computations. Absolute figures are useful but they do not convey much meaning. In terms of accounting ratios, comparison of these related figures makes them meaningful. For example, profit shown by two-business concern is Rs. 50,000 and Rs. 1,00,000. It is difficult to say which business concern is more efficient unless figures of capital investment or sales are also available.

Analysis and interpretation of various accounting ratio gives a better understanding of the financial condition and performance of a business concern.

Profitability Ratios

Classification of various profitability ratios:

a. Gross Profit Ratio (June 03)
b. Net Profit Ratio
c. Operating Profit Ratio
d. Operating Ratio
e. Return on Investment or Return on Capital Employed
f. Return on Equity (Dec. 99, Jan. 01, Dec. 01)
g. Earning Per Share

Meaning, Objective and Method of Calculation:

a. **Gross Profit Ratio**:
Gross Profit Ratio shows the relationship between Gross Profit of the concern and its Net Sales. Gross Profit Ratio can be calculated in the following manner:

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

Where Gross Profit = Net Sales – Cost of Goods Sold
Cost of Goods Sold = Opening Stock + Net Purchases + Direct Expenses – Closing Stock
And Net Sales = Total Sales – Sales Return

Objective and Significance:
Gross Profit Ratio provides guidelines to the concern whether it is earning sufficient profit to cover administration and marketing expenses and is able to cover its fixed expenses. The gross profit ratio of current year is compared to previous years' ratios or it is compared with the ratios of the other concerns. The minor change in the ratio from year to year may be ignored but in case there is big change, it must be investigated. This investigation will be helpful to know about any departure from the standard mark-up and would indicate losses on account of theft, damage, bad stock system, bad sales policies and other such reasons.

However it is desirable that this ratio must be high and steady because any fall in it would put the management in difficulty in the realisation of fixed expenses of the business.

b. **Net Profit Ratio:**
Net Profit Ratio shows the relationship between Net Profit of the concern and Its Net Sales. Net Profit Ratio can be calculated in the following manner:

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

Where Net Profit = Gross Profit – Selling and Distribution Expenses – Office and Administration Expenses – Financial Expenses – Non Operating Expenses + Non Operating Incomes.

And

Net Sales = Total Sales – Sales Return

Objective and Significance:
In order to work out overall efficiency of the concern Net Profit ratio is calculated. This ratio is helpful to determine the operational ability of the concern. While comparing the ratio to previous years' ratios, the increment shows the efficiency of the concern.

c. **Operating Profit Ratio:**
Operating Profit means profit earned by the concern from its business operation and not from the other sources. While calculating the net profit of the concern all incomes either they are not part of the business operation like Rent from tenants, Interest on Investment etc. are added and all non-operating expenses are deducted. So, while calculating operating profit these all are ignored and the concern comes to know about its business income from its business operations.

Operating Profit Ratio shows the relationship between Operating Profit and Net Sales. Operating Profit Ratio can be calculated in the following manner: -

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$$

Where Operating Profit = Gross Profit – Operating Expenses
Or Operating Profit = Net Profit + Non Operating Expenses – Non Operating Incomes
And Net Sales = Total Sales – Sales Return
Objective and Significance:
Operating Profit Ratio indicates the earning capacity of the concern on the basis of its business operations and not from earning from the other sources. It shows whether the business is able to stand in the market or not.

d. **Operating Ratio**:
Operating Ratio matches the operating cost to the net sales of the business.
Operating Cost means Cost of goods sold plus Operating Expenses.

$$\text{Operating Ratio} = \frac{\text{Operating Cost}}{\text{Net Sales}} \times 100$$

Where Operating Cost = Cost of goods sold + Operating Expenses
Cost of Goods Sold = Opening Stock + Net Purchases + Direct Expenses – Closing Stock
Operating Expenses = Selling and Distribution Expenses, Office and Administration Expenses, Repair and Maintenance.

Objective and Significance:
Operating Ratio is calculated in order to calculate the operating efficiency of the concern. As this ratio indicates about the percentage of operating cost to the net sales, so it is better for a concern to have this ratio in less percentage. The less percentage of cost means higher margin to earn profit.

e. **Return on Investment or Return on Capital Employed:**
This ratio shows the relationship between the profit earned before interest and tax and the capital employed to earn such profit.

$$\textbf{Return on Capital Employed} = \frac{\textbf{Net Profit before Interest, Tax and Dividend}}{\textbf{Capital Employed}} \times 100$$

Where Capital Employed = Share Capital (Equity + Preference) + Reserves and Surplus + Long-term Loans – Fictitious Assets
Or Capital Employed = Fixed Assets + Current Assets – Current Liabilities

Objective and Significance:
Return on capital employed measures the profit, which a firm earns on investing a unit of capital. The profit being the net result of all operations, the return on capital expresses all efficiencies and inefficiencies of a business. This ratio has a great importance to the shareholders and investors and also to management. To shareholders it indicates how much their capital is earning and to the management as to how efficiently it has been working.
This ratio influences the market price of the shares. The higher the ratio, the better it is.

f. **Return on Equity:**
Return on equity is also known as return on shareholders' investment. The ratio establishes relationship between profit available to equity shareholders with equity shareholders' funds.

$$\textbf{Return on Equity} = \frac{\textbf{Net Profit after Interest, Tax and Preference Dividend}}{\textbf{Equity Shareholders' Funds}} \times 100$$

Where Equity Shareholders' Funds = Equity Share Capital + Reserves and Surplus – Fictitious Assets

Objective and Significance:

- Return on Equity judges the profitability from the point of view of equity shareholders.
- This ratio has great interest to equity shareholders.
- The return on equity measures the profitability of equity funds invested in the firm.
- The investors favour the company with higher ROE.

g. **Earning Per Share:**
Earning per share is calculated by dividing the net profit (after interest, tax and preference dividend) by the number of equity shares.

$$\text{Earning Per Share} = \frac{\text{Net Profit after Interest, Tax and Preference Dividend}}{\text{No. Of Equity Shares}} \times 100$$

Objective and Significance:
Earning per share helps in determining the market price of the equity share of the company. It also helps to know whether the company is able to use its equity share capital effectively with compare to other companies. It also tells about the capacity of the company to pay dividends to its equity shareholders.

Turnover/Activity/Performance Ratios

Q. Classify the various Turnover/Activity/Performance Ratios. Also explain the meaning, method of calculation and objective of these ratios.

Classification of Turnover/Activity/Performance Ratios:

a. Capital Turnover Ratio
b. Fixed Assets Turnover Ratio
c. Working Capital Turnover Ratio
d. Stock Turnover Ratio
e. Debtors Turnover Ratio
f. Debt Collection Period

Meaning, Objective and Method of Calculation:

a. **Capital Turnover Ratio:**

Capital turnover ratio establishes a relationship between net sales and capital employed. The ratio indicates the times by which the capital employed is used to generate sales. It is calculated as follows:

$$\textbf{Capital Turnover Ratio} = \frac{\textbf{Net Sales}}{\textbf{Capital Employed}}$$

Where Net Sales = Sales – Sales Return
Capital Employed = Share Capital (Equity + Preference) + Reserves and Surplus + Long-term Loans – Fictitious Assets.

Objective and Significance:
The objective of capital turnover ratio is to calculate how efficiently the capital invested in the business is being used and how many times the capital is turned into sales. Higher the ratio, better the efficiency of utilisation of capital and it would lead to higher profitability.

b. **Fixed Assets Turnover Ratio:**
Fixed assets turnover ratio establishes a relationship between net sales and net fixed assets. This ratio indicates how well the fixed assets are being utilised.

$$\textbf{Fixed Assets Turnover Ratio} = \frac{\textbf{Net Sales}}{\textbf{Net Fixed Assets}}$$

In case Net Sales are not given in the question cost of goods sold may also be used in place of net sales. Net fixed assets are considered cost less depreciation.

Objective and Significance:
This ratio expresses the number to times the fixed assets are being turned over in a stated period. It measures the efficiency with which fixed assets are employed. A high ratio means a high rate of efficiency of utilisation of fixed asset and low ratio means improper use of the assets.

c. **Working Capital Turnover Ratio:**
Working capital turnover ratio establishes a relationship between net sales and working capital. This ratio measures the efficiency of utilisation of working capital.

$$\textbf{Working Capital Turnover Ratio} = \frac{\textbf{Net Sales or Cost of Goods Sold}}{\textbf{Net Working Capital}}$$

Where Net Working Capital = Current Assets – Current Liabilities

Objective and Significance:

This ratio indicates the number of times the utilisation of working capital in the process of doing business. The higher is the ratio, the lower is the investment in working capital and the greater are the profits. However, a very high turnover indicates a sign of over-trading and puts the firm in financial difficulties. A low working capital turnover ratio indicates that the working capital has not been used efficiently.

d. **Stock Turnover Ratio:**
Stock turnover ratio is a ratio between cost of goods sold and average stock. This ratio is also known as stock velocity or inventory turnover ratio.

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

Where Average Stock = [Opening Stock + Closing Stock]/2

Cost of Goods Sold = Opening Stock + Net Purchases + Direct Expenses – Closing Stock

Objective and Significance:
Stock is a most important component of working capital. This ratio provides guidelines to the management while framing stock policy. It measures how fast the stock is moving through the firm and generating sales. It helps to maintain a proper amount of stock to fulfill the requirements of the concern. A proper inventory turnover makes the business to earn a reasonable margin of profit.

e. **Debtors' Turnover Ratio:**
Debtors turnover ratio indicates the relation between net credit sales and average accounts receivables of the year. This ratio is also known as Debtors' Velocity.

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Accounts Receivables}}$$

Where Average Accounts Receivables = [Opening Debtors and B/R + Closing Debtors and B/R]/2

Credit Sales = Total Sales – Cash Sales

Objective and Significance:
This ratio indicates the efficiency of the concern to collect the amount due from debtors. It determines the efficiency with which the trade debtors are managed. Higher the ratio, better it is as it proves that the debts are being collected very quickly.

f. **Debt Collection Period:**

Debt collection period is the period over which the debtors are collected on an average basis. It indicates the rapidity or slowness with which the money is collected from debtors.

$$\text{Debt Collection Period} = \frac{\text{12 Months or 365 Days}}{\text{Debtors Turnover Ratio}}$$

Or

$$\text{Debt Collection Period} = \frac{\text{Average Trade Debtors}}{\text{Average Net Credit Sales per day}}$$

Or

$$\text{365 days or 12 months} \times \frac{\text{Average Debtors}}{\text{Credit Sales}}$$

It may be noted that some authors prefer to use 360 days instead of 365 days for the sake of convenience.

Objective and Significance:
This ratio indicates how quickly and efficiently the debts are collected. The shorter the period the better it is and longer the period more the chances of bad debts. Although no standard period is prescribed anywhere, it depends on the nature of the industry.

Liquidity Ratios

Classification of Liquidity Ratios:

a. Current Ratio
b. Liquid Ratio

Meaning, Objective and Method of Calculation:

a. **Current Ratio:**
Current ratio is calculated in order to work out firm's ability to pay off its short-term liabilities. This ratio is also called working capital ratio. This ratio explains the relationship between current assets and current liabilities of a business. Where current assets are those assets which are either in the form of cash or easily convertible into cash within a year. Similarly, liabilities, which are to be paid within an accounting year, are called current liabilities.

Current Ratio	Current Assets

$$= \frac{}{\textbf{Current Liabilities}}$$

Current Assets include Cash in hand, Cash at Bank, Sundry Debtors, Bills Receivable, Stock of Goods, Short-term Investments, Prepaid Expenses, Accrued Incomes etc.

Current Liabilities include Sundry Creditors, Bills Payable, Bank Overdraft, Outstanding Expenses etc.

Objective and Significance:
Current ratio shows the short-term financial position of the business. This ratio measures the ability of the business to pay its current liabilities. The ideal current ratio is suppose to be 2:1 i.e. current assets must be twice the current liabilities. In case, this ratio is less than 2:1, the short-term financial position is not supposed to be very sound and in case, it is more than 2:1, it indicates idleness of working capital.

b. **Liquid Ratio:**
Liquid ratio shows short-term solvency of a business in a true manner. It is also called acid-test ratio and quick ratio. It is calculated in order to know how quickly current liabilities can be paid with the help of quick assets. Quick assets mean those assets, which are quickly convertible into cash.

$$\textbf{Liquid Ratio} = \frac{\textbf{Liquid Assets}}{\textbf{Current Liabilities}}$$

Where liquid assets include Cash in hand, Cash at Bank, Sundry Debtors, Bills Receivable, Short-term Investments etc. In other words, all current assets are liquid assets except stock and prepaid expenses.

Current liabilities include Sundry Creditors, Bills Payable, Bank Overdraft, Outstanding Expenses etc.

Objective and Significance:
Liquid ratio is calculated to work out the liquidity of a business. This ratio measures the ability of the business to pay its current liabilities in a real way. The ideal liquid ratio is suppose to be 1:1 i.e. liquid assets must be equal to the current liabilities. In case, this ratio is less than 1:1, it shows a very weak short-term financial position and in case, it is more than 1:1, it shows a better short-term financial position.

Solvency Ratios

Classification of Solvency Ratios:

a. Debt-Equity Ratio
b. Debt to Total Funds Ratio
c. Fixed Assets Ratio

d. Proprietary Ratio
e. Interest Coverage Ratio

Meaning, Objective and Method of Calculation:

a. **<u>Debt-Equity Ratio:</u>**
Debt equity ratio shows the relationship between long-term debts and shareholders funds'. It is also known as 'External-Internal' equity ratio.

$$\text{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

Where Debt (long term loans) include Debentures, Mortgage Loan, Bank Loan, Public Deposits, Loan from financial institution etc.

Equity (Shareholders' Funds) = Share Capital (Equity + Preference) + Reserves and Surplus – Fictitious Assets

<u>Objective and Significance</u>:
This ratio is a measure of owner's stock in the business. Proprietors are always keen to have more funds from borrowings because:

(i) Their stake in the business is reduced and subsequently their risk too
(ii) Interest on loans or borrowings is a deductible expenditure while computing taxable profits. Dividend on shares is not so allowed by Income Tax Authorities.

The normally acceptable debt-equity ratio is 2:1.

b. **<u>Debt to Total Funds Ratio:</u>**
This ratio gives same indication as the debt-equity ratio as this is a variation of debt-equity ratio. This ratio is also known as solvency ratio. This is a ratio between long-term debt and total long-term funds.

$$\text{Debt to Total Funds Ratio} = \frac{\text{Debt}}{\text{Total Funds}}$$

Where Debt (long term loans) include Debentures, Mortgage Loan, Bank Loan, Public Deposits, Loan from financial institution etc.

Total Funds = Equity + Debt = Capital Employed

Equity (Shareholders' Funds) = Share Capital (Equity + Preference) + Reserves and Surplus – Fictitious Assets

<u>Objective and Significance</u>:

Debt to Total Funds Ratios shows the proportion of long-term funds, which have been raised by way of loans. This ratio measures the long-term financial position and soundness of long-term financial policies. In India debt to total funds ratio of 2:3 or 0.67 is considered satisfactory. A higher proportion is not considered good and treated an indicator of risky long-term financial position of the business. It indicates that the business depends too much upon outsiders' loans.

c. **Fixed Assets Ratio:**

Fixed Assets Ratio establishes the relationship of Fixed Assets to Long-term Funds.

$$\textbf{Fixed Assets Ratio} = \frac{\textbf{Long-term Funds}}{\textbf{Net Fixed Assets}}$$

Where Long-term Funds = Share Capital (Equity + Preference) + Reserves and Surplus + Long-term Loans – Fictitious Assets

Net Fixed Assets means Fixed Assets at cost less depreciation. It will also include trade investments.

Objective and Significance:

This ratio indicates as to what extent fixed assets are financed out of long-term funds. It is well established that fixed assets should be financed only out of long-term funds. This ratio workout the proportion of investment of funds from the point of view of long-term financial soundness. This ratio should be equal to 1.

If the ratio is less than 1, it means the firm has adopted the impudent policy of using short-term funds for acquiring fixed assets. On the other hand, a very high ratio would indicate that long-term funds are being used for short-term purposes, i.e. for financing working capital.

d. **Proprietary Ratio:**

Proprietary Ratio establishes the relationship between proprietors' funds and total tangible assets. This ratio is also termed as 'Net Worth to Total Assets' or 'Equity-Assets Ratio'.

$$\textbf{Proprietary Ratio} = \frac{\textbf{Proprietors' Funds}}{\textbf{Total Assets}}$$

Where Proprietors' Funds = Shareholders' Funds = Share Capital (Equity + Preference) + Reserves and Surplus – Fictitious Assets

Total Assets include only Fixed Assets and Current Assets. Any intangible assets without any market value and fictitious assets are not included.

Objective and Significance:

This ratio indicates the general financial position of the business concern. This ratio has a particular importance for the creditors who can ascertain the proportion of shareholder's funds in the total assets of the business. Higher the ratio, greater the satisfaction for creditors of all types.

e. **Interest Coverage Ratio:**

Interest Coverage Ratio is a ratio between 'net profit before interest and tax' and 'interest on long-term loans'. This ratio is also termed as 'Debt Service Ratio'.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before Interest and Tax}}{\text{Interest on Long-term Loans}}$$

Objective and Significance:

This ratio expresses the satisfaction to the lenders of the concern whether the business will be able to earn sufficient profits to pay interest on long-term loans. This ratio indicates that how many times the profit covers the interest. It measures the margin of safety for the lenders. The higher the number, more secure the lender is in respect of periodical interest.

Practical Problems

Q. The following is the Balance Sheet and Profit & Loss Account of H.S.G. Limited. (Dec. 02)

Balance Sheet
as on 31-3-2001

Liabilities	Rs.	Assets	Rs.
Share Capital (12,000 Equity Share of Rs. 10 each)	1,20,000	Machinery	1,55,000
Reserves and Surplus	35,000	Inventories	65,000
13% Debentures	80,000	Debtors	40,000
Sundry Creditors	50,000	Cash at Bank	35,000
Provision for Taxation	15,000	Prepaid Expenses	5,000
	3,00,000		**3,00,000**

Profit & Loss Account
for the year ended 31-3-2001

Particulars	Rs.
Sales	2,00,000
Less: Cost of Sales	1,30,000
Profit before Interest and Tax	70,000
Less: Interest	10,400
Profit before Tax	59,400
Less: Tax	30,000

Compute:

a. Return on Investment
b. Return on Net Worth
c. Earning per Share
d. Investment Turnover Ratio
e. Current Ratio

Solution

a)

$$\textbf{Return on Investment} = \frac{\textbf{Net Profit before Interest and Tax}}{\textbf{Capital Employed}} \times 100$$

$$= \frac{\text{Rs. } 70{,}000}{\text{Rs. } 2{,}35{,}000} \times 100 = 29.78\%$$

Where Capital Employed = Share Capital + Reserves and Surplus + 13% Debentures

= Rs. 1,20,000 + Rs. 35,000 + Rs. 80,000 = Rs. 2,35,000.

b)

$$\textbf{Return on Net Worth} = \frac{\textbf{Net Profit + Int.}}{\textbf{Net Assets}} \times 100$$

$$= \frac{29{,}600 + 10{,}400}{3{,}00{,}000} \times 100 = 13.33\%$$

c)

$$\textbf{Earning per share} = \frac{\textbf{Net Profit after interest, tax and dividend}}{\textbf{No. of Equity Shares}}$$

$$= \frac{\text{Rs. } 29{,}600}{12{,}000} = 2.46$$

d)

$$\textbf{Investment Turnover Ratio} = \frac{\textbf{Net Sales}}{\textbf{Investment (Capital Employed)}}$$

$$= \frac{\text{Rs. } 2{,}00{,}000}{\text{Rs. } 2{,}35{,}000} = 0.85 \text{ times.}$$

e)

$$\textbf{Current Ratio} = \frac{\textbf{Current Assets}}{\textbf{Current Liabilities}}$$

$$= \frac{\text{Rs. } 1{,}45{,}000}{\text{Rs. } 65{,}000} = 2.23 : 1$$

Where Current Assets = Inventories + Debtors + Cash at Bank + Prepaid Expenses

= Rs. 65,000 + Rs. 40,000 + Rs. 35,000 + Rs. 5,000 = Rs. 1,45,000

Current Liabilities = Sundry Creditors + Provision for Taxation

= Rs. 50,000 + Rs. 15,000 = Rs. 65,000.

Q. The following facts, relate to Excel Ltd. (Dec. 01)

Current ratio = 2.7
Quick ratio = 1.8
Current liabilities = Rs. 6,00,000
Inventory Turnover = 4 times

What would be the sales of the company.

Solution

$$\textbf{Current Ratio} = \frac{\textbf{Current Assets}}{\textbf{Current Liabilities}}$$

$$2.7 = \frac{\text{CA}}{6{,}00{,}000}$$

CA = 16,20,000

Liquid Ratio **Liquid Assets (Quick assets)**

$$= \frac{}{\textbf{Current Liabilities}}$$

$$1.8 = \frac{QA}{6,00,000}$$

= 10,80,000

Stock = CA - QA
= 16,20,000 - 10,80,000 = 5,40,000

$$\textbf{Stock Turnover Ratio} = \frac{\textbf{Cost of Goods Sold or Sales}}{\textbf{Average Stock}}$$

$$4 = \frac{Sales}{5,40,000}$$

Sales = 21,60,000

NOTE: As only closing stock is given therefore this would be treated as average stock.

Q. (a) The margin of profit of Apex Industries is 10%, its total assets turnover ratio is 2 times, and its equity/total assets ratio is 40%. What would be the company's rate of return on equity? (June 01)

(b) If the net profit margin of the above firm is 25 percent, and the ROI is 10 percent, what would be the total assets turnover ratio ? (June 01)

Solution

(a)

Margin of profit = 10%
Total assets turnover = 2 times
Equity/total assets = 40%

ROE = (Total assets/equity) X total assets turnover ratio X net profit margin%

ROE = (100/40) X 2 X 10 = 50%

(b)

$$\textbf{Total assets turnover} = \frac{\textbf{ROI}}{\textbf{Net profit margin}}$$

= 10/25
= 0.4 times

Q. What is the rate of return on equity for a company whose profit margin is 12%, its total assets turnover ratio is 2 times, and its equity/total assets ratio is 40%. (June 00)

Solution

Margin of profit = 12%
Total assets turnover = 2 times
Equity/total assets = 40%

ROE = (Total assets/equity) X total assets turnover ratio X net profit margin%

ROE = (100/40) X 2 X 12 = 60%

LEVERAGE ANALYSIS

In this chapter, you will get an idea about the basic concept of leverage and will be exposed to the role and effects of financial leverage. Leverage ratios reflect the solvency status of a firm.

Meaning

Q. What do you understand by Capital structure? Is the capital structure the same as financial structure? Explain.

Capital structure decisions aims at determining the types of funds a company should seek to finance its investment opportunity and the preparation in which these funds should be raised. The term capital structure is used to represent the proportionate relationship between the various long-term forms of financing such as debentures, long term debts, preference share capital and equity share capital.

CAPITAL STRUCTURE AND LEVERAGE

‘Leverage’ is the action of a lever or the mechanical advantage gained by it; it also means ‘effectiveness’ or ‘power’. The common interpretation of leverage is derived from the use or manipulation of a tool or device termed as lever, which provides a substantive clue to the meaning and nature of financial leverage.

When an organization is planning to raise its capital requirements (funds), these may be raised either by issuing debentures and securing long term loan 0r by issuing share-capital. Normally, a company is raising fund from both sources. When funds are raised from debts, the Co. investors will pay interest, which is a definite liability of the company. Whether the company is earning profits or not, it has to pay interest on debts. But one benefit of raising funds from debt is that interest paid on debts is allowed as deduction for income tax. 'When funds are raised by issue of shares (equity) , the investor are paid dividend on their investment. Dividends are paid only when the Company is having sufficient amount of profit. In case of loss, dividends are not paid. But dividend is not allowed as deduction while computing tax on the income of the Company. In this way both way of raising funds are having some advantages and disadvantages. A Company has to decide that what will be its mix of Debt and Equity, considering the liability, cost of funds and expected rate of return on investment of fund. A Company should take a proper decision about such mix, otherwise it will face many financial problems. For the purpose of determination of mix of debt and equity, leverages are calculated and analyzed.

Capital Structure and Financial Structure Distinguished

In finance literature one often finds the terms capital structure and financial structure used interchangeably. Capital structure of firm represents the proportionate relationship between the various long-term forms of financial while financial structure refers to the way the company's assets are financed. It is the entire left hand side of the balance sheet, i.e., long term and short term sources of funds. Thus, a firm capital structure refers to the permanent financing pattern and is only a part of its financial structure. An analysis of capital structure involves the use of financial leverage factor.

Concept of Financial Leverage (June 03)

Leverage may be defined as the employment of an asset or funds for which the firm pays a fixed cost or fixed return. The fixed cost or return may, therefore be thought of as the full annum of a lever. Financial leverage implies the use of funds carrying fixed commitment charge with the objective of increasing returns to equity shareholders. Financial leverage or leverage factor is defined, as the ratio of total value of debt to total assets or the total value of the firm. For example, a firm having a total value of Rs. 2,00,000 and a total debt of Rs. 1,00,000 would have a leverage factor of 50 percent. There are difficult measures of leverage such as.

1) The ratio of debt to total capital

2) The ratio of debt to equity

3) The ratio of net operating income (earning before interest and taxes) to fixed' charges) The first two measures of leverage can be expressed either in book v8lue or market value the debt of equity ratio as a measure of financial leverage is more popular in practice."

Risk & Financial Leverage

Effects of financial Leverage:

The use of leverage results in two obvious effects:

1) Increasing the shareholders earning under favorable economic conditions, and
2) Increasing the financial risk of the firm. Suppose there are two companies each having a Rs. 1,00,000 capital structure. One company has borrowed half of its investment while the other company has only equity capital: Both earn Rs. 2,00,000 profit. The ratio of interest on the borrowed capital is 10%and the rate of corporate tax 50%. Let us calculate the effect of financial leverage, both in the shareholders earnings and the Company's financial risk in these two companies.

(a) **Effect of Leverage on Shareholders Earnings:**

	Company A Rs.	Company B Rs.
Profit before Interest and Taxes	2,00,000	2,00,000
Equity	10,00,000	5,00,000
Debt	----	5,00,000
Interest (10%)	----	50,000
Profit after interest but before Tax	2,00,000	1,50,000
Taxes @ 50%	1,00,000	75,000

Rate of return on Equity of Company A Rs. 1,00,000/Rs. 10,00,000 = 10%

Rate of return on Equity of Company B Rs. 75,000/Rs. 5,00,000 = 15%

The above illustration points to the favorable effect of the leverage factor on earnings of shareholders. The concept of leverage is 5 if one can earn more on the borrowed money that it costs but detrimental to the man who fails to do so far there is such a thing as a negative leverage i.e. borrowing money at 10% to find that, it can earn 5%. The difference comes out of the shareholders equity so leverage can be a double-edged sword.

(b) **Effect of Leverage on the financial risk of the company**:

Financial risk broadly defined includes both the risk of possible insolvency and the changes in the earnings available to equity shareholders. How does the leverage factor leads to the risk possible insolvency is self-explanatory. As defined earlier the inclusion of more and more debt in capital structure leads to increased fixed commitment charges on the part of the firm as the firm continues to lever itself, the changes of cash insolvency leading' to legal bankruptcy increase because the financial 'charges incurred, by the firm exceed the expected earnings. Obviously this leads to fluctuations in earnings' available to the equity shareholders.

Relationship: Financial and Operating leverage

Q. What is the relationship between financial and operating leverage?

Relationship between financial and operating leverage: In business terminology, leverage is used in two senses: Financial leverage & Operating Leverage

Financial leverage:

The effect which the use of debt funds produces on returns is called financial leverage.

Operating leverage:

Operating leverage refers to the use of fixed costs in the operation of the firm. A firm has a high degree of operating leverage if it employs a greater amount of fixed costs. The degree of operating leverage may be defined as the percentage change in profit resulting from a percentage change in sales. This can be expressed as:

= Percent Change in Profit/Percent Change in Sales

The degree of financial leverage is defined as the percent change in earnings available to common shareholders that is associated with a given percentage change in EBIT. Thus, operating leverage affects EBIT while financial leverage affects earnings after interest and taxes the earnings available to equity shareholders. For this reason operating leverage is sometimes referred to as first stage leverage and financial leverage as second stage leverage. Therefore, if a firm uses a considerable amount of both operating leverage and financial leverage even small changes in the level of sales will produce wide fluctuations in earnings per share (EPS). The combined effect of both these types of leverages is after called total leverage which, is closely tied to the firm's total risk.

BUDGETING AND BUDGETARY CONTROL

Finance is the life blood of a business. Therefore, financial planning is of utmost significance to a businessman. Financial planning is concerned with raising funds and their effective utilization with a view to maximize the wealth of the company.

In spite of good financial plan, the desired results may not be achieved if there is no effective control to ensure its implementation. A budget is an important tool for financial planning and control. The budget represents a set of yardsticks or guidelines for use in controlling internal operations of an organization. The management, through budget, can evaluate the performance of every level of the organization. The discrepancy between planned performance & actual performance is highlighted through budgets.

Budgeting: Meaning

Q. What do you understand by "Budgeting"? Mention the type of budgets that the management of a big industrial concern would normally prepare. How can computers help the management in the matter? (June 00)

A budget is a plan expressed in quantitative, usually monetary term, covering a specific period of time, usually one year. In other words a budget is a systematic plan for the utilization of manpower and material resources. In a business organization, a budget represents an estimate of future costs and revenues. Budgets may be divided into two basic classes: Capital Budgets and Operating Budgets. Capital budgets are directed towards proposed expenditures for new projects and often require special financing. The operating budgets are directed towards achieving short-term operational goals of the organization, for instance, production or profit goals in a business firm. Operating budgets may be sub-divided into various departmental of functional budgets.

The main characteristics of a budget are:

1. It is prepared in advance and is derived from the long-term strategy of the organization.

2. It relates to future period for which objectives or goals have already been laid down. It is expressed in quantitative form, physical or monetary units, or both. Different types of budgets are prepared for different purposed e.g. Sales Budget, Production Budget, Administrative Expense Budget, Raw-material Budget etc. All these sectional budgets are afterwards integrated into a master budget, which represents an overall plan of the organization.

Advantages of Budget

A budget helps us in the following ways:

1. It brings about efficiency and improvement in the working of the organization.

2. It is a way of communicating the plans to various units of the organization. By establishing the divisional, departmental, sectional budgets, exact responsibilities are assigned. It thus minimizes the possibilities of buck passing if the budget figures are not met.

3. It is a way or motivating managers to achieve the goals set for the units.

4. It serves as a benchmark for controlling on-going operations.

5. It helps in developing a team spirit where participation in budgeting is encouraged.

6. It helps in reducing wastage and losses by revealing them in time for corrective action.

7. It serves as a basis for evaluating the performance of managers.

8. It serves as a means of educating the managers.

Budgetary Control

Budgeting is closely connected with control. The exercise of control in the organization with the help of budgets is known as budgetary control. The process of budgetary control includes:

1. Preparation of various budgets

2. Continuous comparison of actual performance with budgetary performance

3. Revision of budgets in the light of changed circumstances

A system of budgetary control should not become rigid. There should be enough scope of flexibility to provide for individual initiative and drive. Budgetary control is an important device for making the organization more efficient on all fronts. It is an important tool for controlling costs and achieving the overall objectives.

The following steps may be taken for installing an effective system of budgetary control in an organization.

Organization for Budgeting:
The setting up of a definite plan of organization is the first step towards installing budgetary control system in an organization. A budget manual should be prepared giving details of the powers, duties, responsibilities and areas of operation of each executive in the organization.

Responsibility for Budgeting:
The responsibility for preparation and implementation of the budgets may be fixed as under:

Budget Controller:
Although the chief executive is finally responsible for the budget program, it is better if a large part of the supervisory responsibility is delegated to an official designated as Budget Controller or Budget Director. Such a person should have knowledge of the technical details of the business and should report directly to the president or the Chief Executive of the organization.

Fixation of the budget period:
Budget period means the period for which a budget is prepared and employed. The budget period depends upon the nature of the business and the control techniques. For example, a seasonal industry will budget for each season while an industry requiring long periods to complete work will budget for four, five or even larger number of year. However, it is necessary of control purposes to prepare budgets both for long as well as short periods.

Budget Procedures:
Having established the budget organization and fixed the budget period, the actual work or budgetary control can be taken upon the following pattern:

Key Factor:
It is also termed as limiting factor. The extent of influence of this factor must first be assessed in order to ensure that the budget targets are met. It would be desirable to prepare first the budget relating to this particular factor, and then prepare the other budgets. We are giving below an illustrative list of key factors in certain industries.

Industry Key factor
Motor car Sales demand
Aluminum Power
Petroleum refinery Supply of crude oil
Electro-optics Skilled technicians
Hydel power generation Monsoon
The key factors should be correctly identified and examined. The key Factors need not be of a permanent nature. In the long run, the management may overcome the key factors by introducing new products, by changing material mix or by working overtime or extra shifts etc.

Making a forecast:
A forecast is an estimated of the future financial conditions or operating results. Any estimation is based on consideration of probabilities. An estimate differs from a budget in that the latter embodies an operating plan of an organization. A budget envisages a commitment to certain objectives or targets, which the management seeks to attain on the basis of the forecasts prepared. A forecast on the other hand is an estimate based on probabilities of an event. A forecast may be prepared in financial or physical terms for sales, production cost, or other resources required for business. Instead of just one forecast a number of alternative forecasts may be considered with a view to obtaining the most realistic overall plan.

Consideration of alternative combination of forecasts:
Alternative combinations of forecasts are considered with a view to contain the most efficient overall plan so as to maximize profits. When the optimum-profit combination of forecasts is selected, the forecasts should be regarded as being finalized.
Preparing budgets: After the forecasts have been completed the preparation of budgets follows. The budget activity starts with the preparation of the sales budget. Then production budget is prepared on the basis of sales budget and the production capacity available. Financial budget (i.e., cash or working capital budget) will be prepared on the basis of sales forecasts and the production budget. All these budgets are combined and coordinated into a master budget. The budget may be revised in the course of the

financial period if it becomes necessary to do so in view of the unexpected developments, which have already taken place or are likely to take place.

Choice between fixed and flexible budgets:
A budget may be fixed or flexible. A fixed budget is base on a fixed Volume of activity. It may lose it s effectiveness in planning and controlling if the actual capacity utilization is different from what was planned for any particular unit of time e.g., a month or a quarter. The flexible budget is more useful for changing levels of activity as it considers fixed and variable costs separately fixed costs as you are aware, remain unchanged over a certain range of output. Such costs change when there is a change in capacity level.
The variable costs change in direct proportion to output. If flexible budgeting approach is adopted, the budget controller can analyses the variance between actual costs and budgeted costs depending upon the actual level of activity

STEPS IN BUDGETARY CONTROL

1. Organization for budgeting

2. Budget manual + Theory

"A document which sets out, inter alias, the responsibilities of the persons engaged in, the routine of and forms and records required for budgetary control."

The **budget manual** is a written document or booklet that specifies the objectives of budgeting organization and procedures. Following are some of the important matters covered in a budget manual:

1. A statement regarding the objectives of the organization and how they can be achieved through budgetary control.

2. A statement regarding the functions and responsibilities of each Executive by designation both regarding preparation and execution of budgets.

3. Procedures to be followed for obtaining the necessary approval of budgets.

4. The authority of granting approval should be stated in explicit terms.

5. Whether one, two or more signatures are to be required on each document should also be clearly stated.

6. Timetable for all stages of budgeting.

7. Reports, statements, forms and other records to be maintained.

8. The accounts classification to be employed. It is necessary that the framework within which the costs, revenues and other financial amount are classified must be identical both in accounts and the budget departments.

There are many advantages attached to the use of budget manual. It is a formal record defining the functions and responsibilities of each executive.
The methods and procedures of budgetary control are standardized.
There is synchronization of the efforts of all which result in maximization of the profits of the organization.

CLASSIFICATION OF BUDGETS

Budgets can be classified into different categories on the basis of time, function or flexibility. The different budgets covered under each category are shown

Chart : Classification of Budgets

Time	**Function**	**Flexibility**
Long Term	Sales	Fixed
Short Term	Production	Flexible
Current	Cost of Production	
Rolling	Purchase	
	Personnel	
	Research	
	Capital Expenditure	
	Cash	
	Master	

Rolling Budget:
Some organizations follow the practice of preparing a rolling or progressive budget In such organizations, a budget for a year in advance will always be there. Immediately after a month, or a quarter, passes, as the case may be, a new budget is prepared for a twelve months. The figures for the month/quarter, which has rolled down, are dropped and the figures for the next month/quarter are added.

Capital Expenditure Budget:
The budget provides guidance as to the amount of capital that may be needed for procurement of capital assets during the budget period. The budget is prepared after taking into account the available productive capacitates probable reallocation of existing assets and possible improvement in production techniques. If necessary separate budgets may be prepared for each item o assets, such a building budget, a plant and equipment budget etc.

Research and Development Budget:

Research and development costs are to be incurred so that the products or the methods of the concern do not become out of date. The research and development budget is a forecast of all such expenses.

Sales budget:
Sales budget generally forms the fundamental basis on which all other Budgets are built. The budget is based on projected sales to be achieved in a budget period. The sales manager is directly responsible for the preparation and execution of this budget. He usually takes into consideration the following organizational and environmental factors while preparing the sales budget.

It is desirable to break up the entire sales budget on the basis of different products, time periods and sales areas or territories.

Description

1. **Past sales figures and trend**:
The record of previous experience forms the most reliable guide as to future sales as the past performances related to actual business conditions. However, the other factors such as seasonal fluctuations, growth of market, trade cycles etc., should not be lost sight of.

2. **Salesmen's estimates**:
Salesmen are in a position to estimate the potential demand of the customers more accurately because they come in direct contact with the customers. However, proper discount should be making for over-optimistic or to conservative estimates of the salesmen depending upon their temperament.

3. **Plant capacity**:
It should be the endeavor of the business to ensure proper utilization of the plant facilitates and that the seal budget provides an economic and balanced production on the factory.

4. **General trade prospects**:
The general trade prospects considerably affect the sales. Valuable information can be gathered in this connection from trade papers and magazines.

5. **Orders on hand**:
In case of industries where production is quite a lengthy process, orders on hand also have a considerable influence in the amount of sales.

6. **Proposed expansion of discontinuance of products**:
It is affects sales and therefore, it should also be considered.

7. **Potential market**:

Market research should be carried out for ascertaining the potential market for the company's products. Such an estimate is made on the basis of expected population growth, purchasing power of consumers and buying habits of the people.

8. **Availability of material and supply**:
Adequate supply of raw materials and other supplies must be ensured before drafting the sales program.

9. **Financial aspects**:
Expansion of sales usually requires increase in capital outlay also, therefore, sales budget must be kept within the bounds of financial capacity.

10. **Other factors**

a. The nature and degree of competition within the industry;

b. Cost of distributing goods;

c. Governments controls, rules and regulations related to the industry;

d. Political situation: national and international as it may have an influence upon the market.

e. Seasonal fluctuations

Production Budget :
This budget provides an estimate of the total volume of production Distributed product-wise with scheduling of operations by days, weeks and months, and a forecast of the inventory of finished products. Generally, the production budget is based on the sales budget. The responsibility for the overall production budget ties with works manager and that of with departmental works managers.

Production budget may be expressed in physical or financial terms or both in relation to production. The production budgets attempt to answer questions like

I. What is to be produced?
II. When is to be produced?
III. How is to be produced?
IV. Where it is to be produced?

The production budget envisages the production program for achieving the sales target. It serves as a basis for preparation of related cost budgets, e.g., materials cost budget, labor cost budget, etc. it also facilities the preparation of a cash budget. The production budget is prepared after taking into consideration several factors like - Inventory policies, sales requirements, production stability, plant capacity, availability of materials and labor, time taken in production process etc.

Production costs budgets:
Basically, there are three elements of costs, namely direct material, Direct labor and overheads. Separate budgets for each of there elements has to be prepared.
The direct materials budget has two components, (i) Materials Requirement budget, (ii) Materials procurement or purchase budget. The former deals with the total quantity of materials required during the budget period, while the latter deals with the materials to be acquired from the market during the budget period. Materials to be acquired are estimated after taking into account the closing and the opening inventories and the materials from which orders have already been placed.

Overhead budget:
The overheads may relate to factory, general administration, sales and distribution function. Separate budgets may, therefore, be prepared for factory overheads, administrative overheads and selling and distribution overheads.

Manufacturing overheads budget:
Factory or manufacturing overheads includes the cost of indirect material, indirect labor and indirect expenses. Manufacturing overheads may be classified into

1. Fixed overheads i.e., which tend to remain constant irrespective of change in the volume of output,
2. Variable overheads i.e., which tend to vary with the output,
3. Semi-variable overheads, i.e., which are partly variable and partly fixed. The manufacturing overhead budget will provide an estimate of these Overheads to be incurred during the budget period.

Fixed manufacturing overhead can be estimated on the basis of past Information and knowledge of any changes which may occur during the ensuring budget period. Variable overheads are estimated after considering the scheduled production and operating conditions in the budget period.

Administrative overheads budget:
This budget covers the administrative expenses including the salaries of the managerial staff. A careful analysis of the needs of all administrative departments of the enterprise is necessary.

Selling and distributing overhead budget:
This budget includes all the expenses relating to selling, advertising, delivery of goods to customers' etc. It is better if such costs are analyzed according to products, types of customers, territories and the sales departments. The responsibility of the preparation of this budget rests with the executives of the sales expected and an effort should be made to control the costs of distribution. The preparation of the budget would depend on analysis

of the market situation by the management, advertising policies, research programs, and the fixed and variable elements.

Cash budget

The cash budget is a summary of the firm's expected cash inflows and outflows over a particular period of time. In other words, cash budget involves a projection of future cash receipts and cash disbursements over various time intervals.
A cash budget helps the management in:

- Determining the future cash needs of the firm.
- Planning for financing of those needs.
- Exercising control over cash and liquidity of the firm.

The overall cash budget can be prepared by any of the following methods :

1. Receipts and payments method
2. The adjusted profit and loss method
3. The balance sheet method

Receipts and payments method:
In case of this method the cash receipts from various sources and the cash payments to various agencies are estimated. In the opening balance of cash estimated cash receipts are added and from the total, the total of estimated cash payments are deducted to find out the closing balance.

The adjusted profit and loss method:
In case of this method the cash Budget is prepared on the basis of opening cash and bank balances, projected profit and loss account and the balances of the various assets and liabilities.

The balance sheet method:
With the help of budgeted balances at the End except cash and bank balances, a budgeted balance sheet can be prepared and the balancing figure would be the estimated closing cash/bank balance. Thus, under this method, closing balances other than cash/bank will have to be found out first to be put in the budgeted balance sheet. This can be done, by adjusting the anticipated transactions of the year in the opening balances.

Budgetary control: Objectives

Q. What do you mean by Budgetary control? State its objectives. (Dec. 02)
Please refer to the previous question for details.

Objectives

- To provide a detailed plan of action for a business over a period of time.

- To coordinate the different units & activities of the organization with a view to utilize the resources judiciously.

- To revise the budgets in the light of changed circumstances.
- To exercise control and on cost through comparison of actual results with the budgeted one.

Budgetary Control Ratios

Q. Discuss the budgetary control ratios and how they are calculated? (Dec. 02)

The following are the three budgetary control ratios:

Activity ratio: It is a measure of the level of activity attained over a period of time. It is obtained by expressing the number of standard hours equivalent to the work produced as a percentage of the budgeted hours.

$$\text{Activity ratio} = \frac{\text{Standard hours for actual production}}{\text{Budgeted hours}} \times 100$$

Capacity Ratio: This ratio indicates whether and to what extend budgeted hours of activity are actually utilised. It shows the relationship between the actual number of working hours and the maximum possible number of working hours in a budget period.

$$\text{Capacity Ratio} = \frac{\text{Actual hours worked}}{\text{Budgeted hours}} \times 100$$

Efficiency Ratio: It indicates the degree of efficiency attained in production. It is obtained by expressing the standard hours equivalent to the work produced as a percentage of the actual hours spent in producing that work.

$$\text{Efficiency Ratio} = \frac{\text{Standard hours for actual production}}{} \times 100$$

Actual hours worked

Master & Financial Budget

Q. Distinguish between Master budget and Financial budget. How does management make use of master budget? Explain the utility of computers in this respect. (Dec. 99)

A budget is a statement, which shows forecasts of the financial activities of a business to achieve a specific purpose. A budget is basically an estimate of receipts and payments of revenue and capital items in future.

MASTER BUDGET

Master budget (also known as summary budget or finalised profit plan) combines all the budgets for a period into one harmonious unit and thus, it show the overall budget plan. As profit planning is the main objective of a budget program, it is but natural that all the subsidiary budgets should be co-ordinated and projected into a master or summary budget, which should show the final projected results of the plan. The master budget incorporates all the subsidiary functional budgets and the budgeted Profit and Loss Account and Balance Sheet. Before the budget plan is put into operation, the master budget is considered by the top management and revised if the -position of profit disclosed therein is not found to be satisfactory. After suitable revision is made, the master budget is finally approved and put into action.

Another view regards the budgeted Profit and Loss Account and the Balance Sheet as the master budget. The Profit and Loss Account is built up from the other budgets already set, and no fresh estimates are necessary. The budgeted cost of production is deducted from the budgeted sales revenue in order to arrive at the budgeted gross profit. The operating profit is obtained by further deduction of the budgeted selling and distribution expenses.
Addition and subtraction of other budgeted income and expenditure items give the budgeted net profit.

The advantages of a forecast Profit and Loss Account are as follows:
(1) It presents an overall projected profit position of the concern.
(2) It enables the planning and control of the profits of the business.
(3) It enables the investigation of causes for variances.
(4) The accuracy of all the budgets is automatically checked.

Period:	Normal capacity		Budgeted capacity	
	Product 1 Rs.	Product 2 Rs.	Product 3 Rs.	Total Rs.

Sales				
Cost of sales				
Direct material				
Direct labour				
Variable Fy. overhead				
Fixed Fy. overhead				
Add Opening stock				
Less Closing stock				
Gross profit				
Administration cost				
Selling and distribution cost				
Net profit				
Assets:				
Current				
Total capital employed Ratios:				
Profit/Capital employed				
Sales/Capital employed				
Profit/Turnover				
Current ratio				
Liquidity ratio				
Appropriations from profit:				
Dividends				
Reserves				
Taxes				
Balance of Profit and Loss				

The preparation of forecast Balance Sheet also is simple. This is prepared on the basis of the last Balance Sheet, wherein all forecast changes of assets and liabilities are included. The advantages of the forecast Balance Sheet are as follows:

I. It reveals the overall financial position of the concern so that management may take action to improve it. The various forecast Balance Sheet ratios would be of assistance to the management in assessing the position.

II. It enables a check to be exercised on the other budgets.

III. The budgeted return on capital employed may be determined.

Necessary changes may be ptade if the return is not considered to be

Forecast Profit and Loss Account

	Period 1	Period 2	Period 3
Sales			

Cost of sales :			
Direct material			
Direct labour			
Variable Fy. overhead			
Fixed Fy. overhead			
Add Opening stock			
Less Closing stock			
Gross Profit			
Administration expenses			
Selling and distribution expenses			
Add Other incomes			
Less Other deductions			
Net profit (before taxes)			

Forecast Balance Sheet

	31st October 20---	**30th November 20---**	**31st December 20---**
Assets:			
Cash			
Debtors			
Stock			
Fixed assets			
Total			
Liabilities :			
Creditors			
Dividends			
Taxes			
Total			
Net Worth:			
Capital			
Reserves and Profit			
Total			

FINANCIAL BUDGET

Financial budget is a summary statement for the future that shows the estimated requirements of cash inflow and outflow.

According to **Walker**, " A financial budget is a comparison of estimated cash inflows and outflows for particular period i.e. a month, a quarter or year."

According to **Guttman and Dougal**, " financial budget is an estimate of cash receipts and disbursements for a future period of time."

Utility and Significance of Cash Budget

a. Financial budget helps in planning of cash requirements that a business need over a period of time.

b. Financial budget helps in keeping a check on the execution of the management policies.

c. Financial budget helps to know whether cash expenditure items can be financed internally or not.

d. Financial budget reveals shortage of cash so that it can be arranged by overdraft.

e. Financial budget also enables the management to ascertain the possibility of financing the capital expenditure projects internally.

f. Financial budget helps the management in knowing existing and anticipating cash resources and their utilisation.

g. Financial budget reveals surplus of cash so that it may be invested properly.

A Financial budget may be prepared either of the following three methods:

1. The receipts and payments method
2. The adjusted profit & loss method
3. The balance sheet method

Receipts and Payment Method
Under receipts and payment method estimate of cash receipts and cash payments is worked out during the budgeted period. Estimated cash receipts are added to opening cash balance and estimated cash payments are deducted out of the total. Thus, the closing cash balance is worked out. Estimates regarding sales are indicated by the sales department that also points out the general trend of credit allowed to customers. Purchase

department makes forecast about the cash and credit purchases and also points out the period after which the credit purchases are met.

Estimates regarding fixed charges and variable cost are made on the basis of past experience.

Format of Financial Budget

Financial Budget
for the months of --- and --- 20—

Particulars	May Rs.	June Rs.	July Rs.
Opening Cash and Bank Balance	----	----	----
Trading Receipts:			
Cash Sales	----	----	----
Collection from Debtors	----	----	----
Non-Trading Receipts:			
Issue of Shares	----	----	----
Issue of Debentures/Long term Loans	----	----	----
Interest Received	----	----	----
Dividend Received	----	----	----
Sale of Fixed Assets/Investments	----	----	----
Miscellaneous Receipts	----	----	----
Total Receipts	**----**	**----**	**----**
Trading Payments:			
Cash Purchases	----	----	----
Payment to Creditors	----	----	----

Labour Cost	----	----	----
Factory Overheads	----	----	----
Administrative Overheads	----	----	----
Selling and Distribution Overheads	----	----	----
Non-Trading Payments:			
Purchase of Fixed Assets/Investments	----	----	----
Taxes Paid	----	----	----
Dividend Paid	----	----	----
Interest Paid	----	----	----
Miscellaneous Payments	----	----	----
Total Payments	----	----	----
Closing Cash and Bank Balance (Total Receipts – Total Payments)			

The Adjusted Profit & Loss Method: -
Financial budget under this method is also known as cash flow statement. This method is useful for long term planning, therefore under this method cash inflow and outflow are estimated for a year.

Balance Sheet Method: -
Under this method the business concern prepares a budgeted balance sheet. Cash and Bank Balance (or overdraft) is computed with this budgeted balance sheet. Budgeted Balance sheet is prepared with all assets items (excluding cash and bank balance) and all liabilities (excluding bank overdraft).

Utility of Computers
Computers are very helpful for various accounting operation such as invoicing, calculation of wages, maintaining accounts, collection of money from customers, maintaining assets, cahs book, etc. With the help of computer, a business concern can have better control over its operations. Computers may be used for credit control, budgetary control, inventory control, etc.

Zero-based budgeting

Q. What do you understand by Zero-based budgeting? (June 98, Dec.00)

The technique of zero base budgeting provides a solution for overcoming the limitations of traditional budgeting by enabling top management to focus on priorities, key areas and alternatives of action throughout the organization
.   .
Some of the problems, which top management has to face are:

1. Programs and activities involving wasteful expenditure are not identified, resulting in avoidable financial and other costs.

2. Inefficiencies of a prior year are carried forward in determining subsequent years' levels of performance.

3. Managers are not encouraged to identify and evaluate alternative means of accomplishing the same objective.

4. Decision-making is irrational in the absence of rigorous analysis of all proposed costs and benefits.

5. Key problems and decision areas are not highlighted. Thus, no priorities are established throughout the organisation.

6. Managers tend to inflate their budget requests resulting in more demand for funds than their availability. This results in recycling the entire budgeting process.

The technique of zero base budgeting suggests that an organisation should not only make decisions about the proposed new programs, but, should also review the appropriateness of the existing programs from time to time. Such a review should particularly be done of such responsibility centers where there is relatively high proportion of discretionary costs. Costs of this type depend on the discretion or policies of the responsibility center or top managers. These costs have no direct relation to volume of activity. Hence, management discretion typically determines the amount budgeted. Some examples are - expenditure on research and development, personnel administration, legal advisory services.

Zero base budgeting, as the term suggests, examines or reviews a program or function or responsibility from 'scratch', The reviewer proceeds on the assumption that nothing is to be allowed. The manager proposing the activity has, therefore, to justify that the activity is essential and the various amounts asked for are reasonable taking into account the outputs or results or volume of activity envisaged. No activity or expense is allowed simply because it was being allowed or done in the past. Thus, according to this technique each program, whether new or existing, must be justified in its entirety each time a new budget is formulated.

It involves:

i. dealing with practically all elements of managers' budget requests

ii. critical examination of ongoing activities along with the newly proposed activities

iii. providing each manager a range of choices in setting priorities in respect of different activities and in allocating resources

Process of Zero-Base Budgeting

The following steps are involved in zero base budgeting:

Determining the objectives of budgeting:
The objective may be to effect cost reduction in staff overheads or it may be to drop, after careful analysis, projects which do not fit into achievement of the organizations objectives etc.

Deciding on scope of application:
The extent to which the zero base budgeting is to be introduced has to be decided, i.e. whether it will be introduced in all areas of the organization's activities or only in a few selected areas on trial basis.

Developing decision units:
Decision units for which cost - benefit analysis is proposed have to be developed so as .to arrive at decisions whether they should be allowed to continue or be dropped. Each decision unit, as far as possible should be independent of other units so that it can be dropped if the cost analysis proves to be unfavorable for it.

Developing decision packages:
A decision package for each unit should be developed. While developing a decision package, answers to the following questions would be desirable:

i. Is it necessary to perform a particular activity at all? If the answer is in the negative, there is no need to proceed further.

ii. How much has been the actual cost of the activity and what has been the actual benefit both in tangible as well as intangible forms?

iii. What should be the estimated cost of the level of activity and the estimated benefit from such activity?

iv. Should the activity be performed in the way in which it is being performed and what should be the cost?

v. If the project or activity is dropped, can the unit be replaced by an outside agency?

After completing decision packages for each unit, the units are ranked according to the findings of cost-benefit analysis. Essential projects are identified and given the highest ranks. The last stage is that of implementing the decisions taken in the light of the study made. It involves the selection and acceptance of those projects which have a positive cost-benefit analysis or which are capable of meeting the objectives of the organisation.

Advantages of zero base budgeting

1. It provides the organisation with a systematic way to evaluate different operations and programs undertaken. It enables management to allocate resources according to priority of the programs.

2. It ensures that each and every programme undertaken by managers is really essential for the organisation, and is being performed in the best possible way.

3. It enables the management to approve departmental budgets on the basis of cost-benefit analysis. No arbitrary cuts or increases in budget estimates are made.

4. It links budgets with the corporate objectives. Nothing will be allowed simply because it was being done in the past. An activity may be shelved if it does not help in achieving the goals of the enterprises.

5. It helps in identifying areas of wasteful expenditure and, if desired, it can also be used for suggesting alternative courses of action.

6. It facilitates the introduction and implementation of the system of 'management by objectives'. Thus, it can be used not only for fulfillment of the objectives of traditional budgeting, but also for a variety of other purposes.

INVESTMENT APPRAISAL METHOD

A very important aspect of financial management is proper decision-making in respect of investment of funds. Successful operation of any business depends upon the investment of resources in such a way as to bring in benefits or best possible returns from any investment.

An appraisal of any investment proposal is necessary to ensure that the investment resources will bring in desired benefits in future. Since resources are limited, a choice has to be made among the various investment proposals by evaluating their comparative merit. It is apparent that some techniques should be followed for making appraisal of investment proposals. This chapter focuses on various appraisal methods.

Methods of Appraisal

Q. Write short notes on the following:

- Pay Back Period (Dec. 97, Dec. 98, June 03)
- Accounting Rate of Return (June 03)

- Net Present Value
- Internal Rate of Return (June 98, Dec. 98, June 99)
- Profitability Index

In simple terms it means the total period within which the total amount invested will be recovered throughout net cash flow (after tax). Suppose a sum of Rs. 5 lakh has to be invested in a project whose expected net cash flows are as follows:

	Incremental cash Flow (Rs. 000)		
Year	**Annual**	**Annual**	**Cumulative**
0	(---) 500	(---)	500
1	185	(---)	315
2	125	(---)	190
3	140	(---)	50
4	170	(---)	120
5	180		300

The money invested (Rs. 5 lakh) could be recovered during the fourth year. The payback period is 3.29 yrs. The payback period can be calculated as:

P = E + B/C

Where P: payback period
E: no. of years immediately preceding the year of final recovery
B: balance amount still to be recovered
C: cash flow during the year of final recovery

Weaknesses
The greatest weakness of this method is that it ignores the timing and amount of all cash inflows. It does not any cognizance of the cash flows after the payback period. Thus, this method is not appropriate either for absolute or comparative appraisal. The payback method concentrates only on liquidity aspect and ignores the overall profitability of a project.

Accounting Rate of Return (June 03)
This method of working out the rate of return on investment is based on the financial accounting practices of the company for working out the annual profits. The net annual profits are derived after deducting depreciation and taxes. The average of annual profits thus derived is worked out on the basis of the period of the life of the project. Example:

Years	Cash Flow (after tax)	Depreciation	Interest
1	13,000	6,000	400
2	11,000	6,000	400
3	9,000	6,000	400
4	6,400	6,000	400

5	6,400	6,000	400
Total	**45,800**	**30,000**	**2,000**

The investment is Rs. 30,000. Accounting rate of return will be equal to the average of net cash flow (after depreciation, taxes, & interest) as a percentage of investment.

$$\frac{(45{,}800 - 30{,}000 - 2{,}000) \times 1/5}{\text{Rs. } 30{,}000} = 9.2$$

Since the investment in this example is a depreciable asset so it could be argued that the investment base for calculating ARR ought to be average investment which would be one-half of initial investment, in this case Rs. 30,000/2 = 15,000. Now the ARR will be:

$$\frac{(45{,}800 - 30{,}000 - 2{,}000) \times 1/5}{\text{Rs. } 15{,}000} = 18.4$$

Weakness

This method like the Payback method ignores the time value of cash flows since it does not give any recognition to the timing of the generation of income. Thus ARR method suffers from a serious drawback by neglecting the quality or pattern of benefits and by ignoring the time value of money. It also does not take into account the scrap value of asset (or project) at the end of its useful life. Finally, the calculation of profit is subject to varying practices. All these factors make ARR a less reliable method.

NET PRESENT VALUE

Calculation of the net present value of future income is related to the understanding of the compounded rate of interest or the general formula of compounding. Suppose a sum of Rs. 100 (P) is invested for a period of one year at a rate of interest (r) of 10% per annum. The investment at the end of one year will be equal to

$$P\left(1 + \frac{r}{100}\right)^n$$

$$100\left(1 + \frac{10}{100}\right)^1$$

= 110

It can also be stated that Rs. 110 in one year's time is worth only Rs. 100 today. Applying the compounding formula over a number of years to work out the present value (PV) of a future flow of income will be reconstructed as

$$PV = \frac{P}{\left(1 + \frac{r}{100}\right)^n}$$

Where P is the amount to be received in future (number of years = n). Example: Suppose we want to know cash flow of Rs. 500 to be received at the end of five years discounted at 10% rate of interest. The PV will be:

$$PV = \frac{500}{\left(1 + \frac{10}{100}\right)^5}$$

The following table shows the discount factor for 10% over a period of 5 years in respect of the present value of one rupee.

Years	Amount Rs.	Present value factor	Present value Rs.
1	1,000	.909	909
2	1,000	.826	826
3	1,000	.751	751
4	1,000	.683	683
5	1,000	.621	621
			3790

By adding the PV of the annual inflow of cash for each year of the expected life of the project we come to know the PV of the aggregate of inflows. This can easily be compared with the cash outflow needed today for investment. The proposal is acceptable is the aggregate PV of cash inflow is more than the current outflow.

Internal Rate of Return: The Internal Rate of return is a method under the discounted cash flow technique which is used for appraising the investment proposals. Under this method, we derive the discounting rate at which the aggregate of the PVs of all future cash inflows equals the present cash outflows for the proposal.

Weakness

Compared to pay back period or ARR methods, the NPV method is difficult to calculate. What discount rate is to be used in calculating net present values may be difficult to decide. The selection of discount rate has a significant effect on the desirability of the project. With a change in rate, a desirable project may become undesirable and vice versa. Moreover, NPV is an absolute measure. For projects involving different outlays the NPV method may not give dependable results. It may also not give satisfactory results where the projects under competition have different lives.

Internal Rate of Return (June 98, Dec. 98, June 99)

The internal rate of return is another method under the Discounted cash Flow technique that is used for appraising the investment proposals. Under this method, we derive the discounting rate at which the aggregate of the PVs of all future cash inflows equals the present cash outflows for the proposal.

Mathematically

$$IRR = LRD + \frac{NPVL}{PV} \times R$$

Where:
IRR is the internal rate of return
LRD is the Lower rate of discount
NPVL is the net present valus at lower rate of dicount
PV is the difference in present values at lower and higher discount rates
R is the difference between two rates of discount

Advantages & Limitations

IRR, like NPV, takes into consideration time value of money and also the total cash inflows & outflows over the entire life of the project. For managers it is easier to understand as the calculation is always a % and not an absolute value. Another advantage is that it does not require discounting rate. The method itself provides a rate of return. However, IRR require tedious calculations. Under IRR method, it is assumed that cash flows are reinvested at the same rate of IRR. This also implies that if IRR of two projects is 16% and 20%, the cash flows arising from these two projects will also be reinvested at their respective rates, i.e., 16% & 20%

Profitability Index

It is also known as benefit-cost ratio. The profitability index is the relationship between the present value of net cash inflows and the present value of cash outflows. It can be worked out either in unitary or in percentage terms.

The formula is:

Profitability Index = Present value of cash inflows/present value of cash outflows

Major Investment Decisions

Q. What are the factors influencing major investment decisions of a large corporation? (June 02)

The following are some important factors that are generally considered while making a major investment decision:

- **Amount of Investment:** If a firm has abundant funds then it can accept all capital investment proposals which give a rate of return higher than the minimum acceptable or cut-off rate. But most firms have limited funds.

- **Minimum Rate of Return:** The minimum rate of return is decided on the basis of the cost of capital. For example, if the cost of capital is 15%, the management will not be interested in a proposal that will return less than 15%.

- **Cut-of-point:** The cut-off-point is a point below which the management does not accept a project.

- **Ranking of Investment Proposals:** When there are multiple acceptable projects, the management will rank the projects in order of their profitability & select the most profitable project.

- **Risk Factor:** Different investment proposals have different degrees of risk. A project may provide high degree of return but it may also have a high degree of risk.

- **Return Expected from Investment:** Capital investment decisions are made in anticipation of increased return in future. It is therefore very necessary to estimate the future return of benefits accruing from the investment proposals. There are two criteria available for quantifying benefits from capital investment decisions. They are: (a) accounting profit, (b) cash flows. The term accounting profit is identical with income concept used in accounting. While in estimating cash flows, depreciation charges and other amortization charges of fixed assets are not subtracted from gross revenue, because no cash expenditure is involved.

Management of Working Capital

Introduction:

To operate profitably, every organization requires effective financial management. Funds can be invested for permanent or long-term purposes such as acquisition of fixed assets, diversification and expansion of business, renovation or modernization of plant and machinery, and research & development. Funds are also required for short-term purposes, that is, for current operations of the business. For example, payment of wages, meeting routine expenses, etc.

Working capital refers to a firm's investment in short-term assets, viz. Cash, short-term securities, debtors, inventory, etc. In other words, Working capital is the investment needed for carrying out day to day operations of the business. The management of working capital is equally important as the management of long-term financial investment.

Meaning, Need & Types of Working Capital

Q. Write a short note on Working Capital (June 99)
Working Capital refers to investment in current assets. This is also known as gross concept of working capital. There is another concept of working capital known as net working capital. Net working capital is the difference between current assets and current liabilities.

Working Capital = Current Assets – Current Liabilities

Net working capital is a qualitative concept, which indicates the liquidity position of the firm, and the extent to which working capital needs may be financed by permanent sources of funds. In other words we can say total current assets should be sufficiently in excess of current liabilities to constitute a margin or buffer for obligations maturing within the ordinary operation cycle of a business. A weak liquidity position poses a threat to the solvency of the company and makes it unsafe. Excessive liquidity is also not goods for the business. Therefore it is necessary for the management to take a prompt and timely action to improve the imbalance of the liquidity of the business.

Q. What do you mean by Working Capital? What is need of working capital? Describe the various types of working capital?

Or
What do you mean by working capital? What special consideration would you keep in mind while assessing the requirements of working capital?

Working Capital refers to investment in current assets. This is also known as gross concept of working capital. There is another concept of working capital known as net working capital. Net working capital is the difference between current assets and current liabilities.

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Kinds of working capital:

Ordinarily, working capital is classified into two categories:
1. Fixed or Permanent Working Capital; and
2. Fluctuating or Variable Working Capital.

The need for current assets is associated with the operating cycle which, as we know is a continuous process. As such, the need for current assets is felt constantly. The magnitude of investment in current assets however may not always be the same. The need for investment in current assets may increase or decrease over a period of time according to the level of production. Nevertheless, there is always a certain minimum level of current assets, which is essential for the firm to carryon, its business irrespective of the level of operations. This is the irreducible minimum amount necessary for maintaining the circulation of the current assets. This minimum level of investment in current assets is permanently locked up in business and is therefore referred to as permanent or fixed or regular working capital. It is permanent in the same way as investment in the firm's fixed assets is.

Depending upon the changes in production and sales, the need for working capital, over and above the permanent working capital, will fluctuate. The need for working capital may also vary on account of seasonal changes or abnormal or unanticipated conditions. For example, a rise in the price level may lead to an increase in the amount of funds invested in stock of raw materials as well as finished goods. Additional doses of working capital may be required to face cut throat competition in the market or other contingencies like strikes and lockouts. Any special advertising campaigns organized for increasing sales or other promotional activities may have to be financed by additional working capital. The extra working capital needed to support the changing business activities is called the fluctuating (variable, seasonal, temporary or special working capital.

Because of its close relationship with day to day operations of a business, a study of working capital and its management is of major importance to internal, as well as external analysts. It is being increasingly realised that inadequacy or mismanagement of working capital is the leading cause of business failures. We must not lose sight of the fact that management of working capital is an integral part of the overall financial management and, ultimately, of the overall corporate management. Working capital management thus throws a challenge and should be a welcome opportunity for a financial manager who is ready to playa pivotal role in his organisation.
Neglect of management of working capital may result in technical insolvency and even liquidation of a business unit. With receivables and inventories tending to grow and with increasing 'demand for bank credit in the wake of strict regulation of credit in India by the Central Bank, managers need to develop a long-term perspective for managing

working capital. Inefficient working capital management may cause either inadequate or excessive working capital, which is dangerous.

A firm may have to face the following adverse consequences from inadequate working capital:

1. Growth may be stunted. It may become difficult for the firm to undertake profitable projects due to non-availability of funds.
2. Implementation of operating plans may become difficult and consequently the firm's profit goals may not be achieved.
3. Operating inefficiencies may creep in due to difficulties in meeting even day to day commitments.
4. Fixed assets may not be efficiently utilised due to lack of working funds, thus lowering the rate of return on investments in the process.
5. Attractive credit opportunities may have to be lost due to paucity of working capital.
6. The firm loses its reputation when it is not in a position to honour its short-term obligations. As a result, the firm is likely to face tight credit terms.

On the other hand, excessive working capital may pose the following dangers:

1. Excess of working capital may result in unnecessary accumulation of inventories increasing the chances of inventory mishandling, waste, and theft.
2. It may provide an undue incentive for adopting too liberal a credit policy and slackening of collection of receivables causing a higher incidence of bad debts has an adverse effect on profits.
3. Excessive working capital may make management complacent, leading eventually to managerial inefficiency.
4. It may encourage the tendency to accumulate inventories for making speculative profits, causing a liberal dividend policy, which becomes difficult to maintain when the firm is unable to make speculative profits.

An enlightened management, therefore, should maintain the right amount of working capital, on a continuous basis. Financial and statistical techniques can be helpful in predicting the quantum of working capital needed at different points of time.

Inadequacy of Working Capital

Q. What would be the adverse consequences of inadequate working capital. (Dec. 01)
In fact inadequacy or mismanagement of working capital is the leading course of business failures. So its necessary to have an effective financial management.

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6. The firm loses its reputation when it is not in a position to honour its short-term obligations. As a result, the firm is likely to face tight credit terms.
7. Post Payment: When there exists lesser working capital in the organization it cannot pay cash on due dates.

Determinants of Working Capital

Q. What are the factors that a finance manager would take into consideration while determining the working capital requirements of his firm? (June 01, June 03)

The working capital requirements of a corporate differ from company to company. There are no rules or formulas to determine the working capital requirements of a firm. The management has to consider a number of factors to determine the level of working capital.

The following are some important factors:

Nature & Size of Business

The working capital of a firm basically depends upon the nature of its business. Trading & financial firms generally have low investment in fixed assets, but require a large investment in working capital. In contrary to this, public utilities have limited need for working capital and have to invest abundantly in fixed assets. Their working capital requirements are nominal because they have cash sales only and they supply services, not products.

The size of business also has an important impact on its working capital needs. Size may be measured in terms of the scale of operations. A firm with larger scale operations will need more working capital than a small firm.

Manufacturing Cycle

The manufacturing cycle starts with the purchase of raw materials and is completed with the production of finished goods. If the manufacturing cycle involves a longer period the need for working capital will be more, because an extended manufacturing time span means a larger tie-up of funds in inventories.

Seasonal Variation

Seasonal and cyclical fluctuations in demand for a product affect the working capital requirement considerably, especially the temporary working capital requirements of the firm. An upward swing in the economy leads to increased sales, resulting in an increase in the firm's investment in inventory and receivables or book debts & vice versa.

Production Policy

If a firm follows steady production policy, even when demand is seasonal, inventory will accumulate during off-season periods and there will be higher inventory costs & risks. Firms whose physical facilities can be utilized for manufacturing a variety of products can have the advantage of diversified activities. Such firms manufacture their main products during the season and other products during off-season. Thus, production policies may differ from firm to firm. Accordingly, the need for working capital will also vary.

Turnover of Circulating Capital

The speed with which the operating cycle completes its round plays a decisive role in influencing the working capital needs.

Credit Policy

The credit policy of the firm affects the size of working capital by influencing the level of book debts. A long collection period will generally mean tying of larger funds in book debts.

Growth & Expansion Activities

The working capital need increases with the growth & expansion of a company. Although, is difficult to determine the relationship between the growth in the volume of business & the growth in the working capital of a business, yet it may be concluded that for normal rate of expansion in the volume of business, one can retain profits in business for providing working capital, fast growing need more working capital.

Operating Efficiency

Operating efficiency means optimum utilization of resources. The firm can minimize its need for working capital by efficiently controlling its operating costs.

Price Level Changes

Generally, rising prices requires a higher investment in working capital. With increasing prices the same levels of current assets need enhanced investment. The effects of increasing price level may, however, be felt differently by differently firms due to variations in individual prices. It is possible that some companies may not be affected by the rising prices, whereas others may be badly hit.

Other Factors

Some other factors like management ability, import policy, asset structure, banking facilities, etc., also influence the requirements of working capital.

Efficiency Criteria

Q. How would you judge the efficiency of the management of working capital in a business enterprise? Explain with the help of hypothetical data. How can computers help? (June 99)

Working capital refers to a firm's investment in short term assets, viz. Cash, short-term securities, inventories, accounts receivables, etc. Improved profitability of a firm, to a great extent, depends on its efficiency in managing working capital.
Some of the parameters for judging the efficiency in managing working capital are:

Whether there is enough assurance for the creditors about the ability of the company to meet its short-term commitments on time. Hence, a reliable index is whether a company can settle the bills on due dates. The finance department has to plan in advance to maintain sufficient liquidity to meet maturing liabilities.

Whether maximum possible inventory turnover is achieved. The adverse effect of ineffective inventory management may not be offset even by the most efficient management of other components of working capital.

Whether reasonable credit is extended to customers. This powerful instrument to promote sales should not be misused. The other side of the same coin is receiving credit. Both depend upon a company's strength as a seller and as a buyer.

Whether adequate credit is obtained from suppliers. It depends upon the company's position in relation to its suppliers and the nature of supply market, i.e., whether there is a single supplier or a large number of suppliers. With coordination of efforts buyers can be in a position to negotiate competitive credit terms even if there is a single supplier and his ability to control the market. At times the supplier imposes the credit terms as 100% advance, i.e., negative trade credit.

Whether there are adequate safeguards to ensure that neither overtrading nor undertrading takes place.

The following indices can be used for measuring the efficiency in managing working capital:

Current Ratio (CR)

CR = Current Assets/Current Liabilities

It indicates the ability of a company to manage the current affairs of business. It is useful to study the trend of working capital over a period of time.
Quick Ratio (QR)

QR = Liquid Assets/Current Liabilities

Where liquid assets include Cash in hand, Cash at Bank, Sundry Debtors, Bills Receivable, Short-term Investments etc. In other words, all current assets are liquid assets except stock and prepaid expenses.

Current liabilities include Sundry Creditors, Bills Payable, Bank Overdraft, Outstanding Expenses etc.

Cash to Current Assets: If cash alone is a major item of current assets then it may be a good indicator of the profitability of the organization as cash by itself does not earn any profit, the proportion should usually be kept low.

Sales to Cash Ratio

Sales to Cash Ratio = Sales/Average cash balance during the period.

Cash should be turned over as many times as possible, in order to achieve maximum sales with minimum cash on hand.

Average Collection Period
(Debtors/Credit Sales) x 365

This ratio explains how many days of credit a company is allowing to its customers to settle their bills.

Average Payment Period

Average payment period = (Creditors/Credit purchases) x 365

It indicates how many days of credit is being enjoyed by the company from its suppliers.

Inventory Turnover Ratio (ITR)

ITR = Sales/Average Inventory

It shows how many times inventory has turned over to achieve the sales. Inventory should be maintained at a level which balances production facilities and sales needs.

Working Capital to Sales: It signifies that for any amount of sales a relative amount of working capital is needed. If any increase in sales is contemplated it has to be seen that working capital is adequate. Therefore, this ratio helps management in maintaining working capital, which is adequate for the planned growth in sales.

Working Capital to Net Worth

Working Capital/Net worth:

This ratio shows the relationship between working capital and the funds belonging to the owners. If this ratio is not carefully watched, it may lead to overtrading & undertrading. Efficient working capital management should, therefore, avoid both overtrading and undertrading.

Managing cash Needs

Introduction

This chapter discusses the planning & management of cash needs. Cash is vital for a business and is like blood stream in human body. Cash denotes the liquidity of a business enterprise and plays an important role in nurturing and improving the profitability of the organization. It is, therefore, essential to make a proper estimate of the cash needs and plan for it so as to avoid technical or legal insolvency.

Q. What do you mean by Cash Management? What are the reasons of holding cash? Describe the objectives of Cash Management and the problems, which may be arise while during managing cash.

For the purpose of working capital management the most important element is the cash management. A firm should make proper assessment of cash requirements. Assessment of requirements for cash (cash planning) involves formulation of two types of cash policies, viz.; normal policies and abnormal policies. Normal cash policies are concerned wit4 determination and procurement of such needs, which can be anticipated, with a reasonable degree of accuracy. Abnormal cash requirements arise out of unpredictable events.

There are three motives for cash:

i. the transaction motive,
ii. the precautionary motive, and
iii. the speculative motive.

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"The transaction motive for holding cash is helpful in the conduct of everyday ordinary business such as making of purchases & sales."

Cash balance is required for making payments for purchases, wages, administrative and selling expenses, taxes dividends, etc. Such payments occur in the routine course of business:

An ideal situation is when there is perfect synchronization between the inflow (cash coming in the business) and outflow (cash going out of business) of cash. But this ideal situation is found the firm needs only a small cash balance. In order to determine the amount of cash needed for transaction purposes, the activities of the should be analyzed for isolating the causes for normal, discrepancies 1eaverages the "outflow" and "inflow" there, may be two causes for such discrepancies:

i. The difference between the credit-period allowed by the forms to its customer and the credit period availed of by the forms from its suppliers (for example, a firm is selling to its customers on any month's credit and is purchasing from its supplying on two month's credit).

ii. Extra-ordinary payments and extra-ordinary receipts (for example, purchase of fixed assets and ,sale of shares debentures and unneeded 'plant).

"The precautionary motive is concerned with predictability of cash inflows and outflows."

Floods, strikes, the failure of important customers to make payments are some of the factors, which cause unpredictable discrepancies between cash inflows and outflows.

For meeting such unexpected contingencies, precautionary cash reserves are maintained. There is direct relationship between the size of precautionary cash balance and the ability of the firm to assume risk. If the firm is willing to assume risk, the precautionary cash balance will be smaller than that when the firm is not willing to assume risk. If the firm has good credit standing and has the capacity to borrow for short term as and when need arise precautionary cash balance would be smaller. We know that cash as an asset, does not earn any profit: It is, therefore, found that majority of the firms invest a large part of precautionary cash balance in marketable recruiting (which can be easily sold for realizing cash) for offsetting a complete loss of return on precautionary cash balance.

"The speculative motive for keeping Cash is a result of seeking opportunities, such as buying inventory at favourable prices either at depressed prices or at normal prices just before an anticipated rise." (Nemmers and Grunewald, Basic Managerial Finance).

In other words, cash balance kept for taking advantage of profitable opportunities is said to have been kept with speculative motive. As a matter of sound financial management, speculation with cash balances should be avoided. A firm should not speculate on inventory purchases. It does not mean that purchase of large inventory loss at favourable prices should not be made. But the purposes should be to economize on the cost of inventory and not to hold large amount of inventory just to take advantage of an anticipated rise in prices. While assessing the requirement for cash balances, minimum possible weight age should be given to speculative motive.

While determining the amount of Transaction and Precautionary Balances, certain possible 'influences' must be considered. These influences are:

i. **The Expected Net Cash Flows**: For determining the expected net cash flows in the future, a 'Cash Budgeted' is prepared. Cash budgeted shows a particular period. It shows the short term and long term cash needs of the firm. It is a device, which helps in controlling cash expenditures. It helps, in advance, in testing the impact of proposed programs on cash position. It suggests the term form of financing that should be used for meeting any cash needs. It aids in maintaining a suitable dividend policy.

ii. **Possible Deviation from Expected Net Cash Flow**: An effort should be made to predict the variation in cash outflows and inflows under different situations. Applying probability concepts can make this prediction.

iii. **The Maturity structure of the firm's Debt**: A firm borrowing funds from time to time will-have a schedule of repayment of loans. This schedule should be analyzed to find out cash outflows in different periods as it would influences the Cash balances need in different periods of time.

iv. **Borrowing capacity**: The firm's capacity to borrow funds for meeting cash needs arising out of emergency also influences the size of cash needs, especially for precautionary purposes.

v. **The Efficiency of Cash Management**: The efficiency of cash management refers to the time value of funds concept. This concept emphasizes that one rupee received to day in the near future has more value than one rupee received after a long interval of time. In order to gain efficiency in managing cash, efforts should be made to speed-up cash inflows and delay in payments adversely affect the goodwill and credit standing of the delay the out flowing of funds. Greater the efficiency on managing cash smaller will be size of cash balances.'

Factors affecting requirement for cash:

The amount of cash, which is needed for transaction purposes can be easily, be predicted. It depends upon a number of factors. Some more important factors are:

i. Credit Position.
ii. Status of Receivables.
iii. Status of Inventory Accounts.
iv. Nature of Enterprise.
v. Attitude of Management of the Firm toward Risk.

Credit position of a firm affect the cash balance in two ways:

i. If an enterprise has good credit standing, on the basis of its past behaviour and present resources, in the eyes of creditors – present as well as prospective - it may carry its activities with a small cash balances. As and when will need additional cash, it can easily get from bankers and creditors because of its reputation.

ii. Because of good credit position, the enterprise can meet a large part of its inventory requirements by purchasing inventory on credit. '

Status of receivables is determined and governed by the efficiency and capacity of the firm to collect receivables with a shorter time lag, and reduce bad debts by making proper selection of customers on the basis of a careful analysis of credit worthiness of customers. A firm, which extends the facility of shorter credit period, is likely to have quick turnover of receivables. If the firm is able to synchronies payments of cash, with turnover of receivables it will need smaller cash balance for normal transactions. Otherwise, the firm will be required to maintain a relatively larger cash balance.

Status of Inventory accounts affects cash requirements: At any particular time, the size of inventory held by a firm governs the amount of cash blocked inventory. Inventory policies affect the amount of cash tied up. If there are two firms - A &B, and firm A, as a matter of policy, intends to keep inventory stock equal to the requirement for three months while from B wants to keep inventory stock equal to the requirement for two months, firm A will be required to maintain larger investments in cash for financing the purchase of inventory than the firm B.

Nature of enterprise refers for to the nature of demand for the product of the firm. If the demand for the products of the firm is fairly stable throughout the accounting period, the firm can carry on with relatively smaller cash balance whereas the firm that having fluctuating demand for its products will need a large cash balance. The amount of sales in relation to assets also affects the cash reserves required. A firm having sales revenue four times the investments in fixed assets. It may be noted that cash requirements do not increase in the same proportion in which sales increase. Cash requirements increase at a decreasing rate.

Attitude of management towards risk may be either conservative or modem: A firm which formulates working capital policies keeping in view the current circumstances and plans for working capital requirements, a firm can be able to predict future cash needs and can keep cash balance according to expected needs without going against liquidity consideration. A firm do not resorting to planning, is likely to hold a large cash reserves for maintaining liquidity requirements which are not determined on scientific basis and therefore, are quite uncertain.

Capital Structure

Introduction

Finance is an important input for any type of business and is needed for working capital and for permanent investment. The total funds employed in a business are obtained from various sources. Some of the funds are permanently held in the business, such as share capital and reserves (owned funds), some others are held for a long period such as long-term borrowings or debentures, and still some other funds are in the nature of short-term borrowings.

Capital Structure represents the total long-term investment in a business firm. It includes funds raised through ordinary and preference shares, bonds, debentures, term loans from financial institutions, earned revenue, capital surpluses, etc.

Q. What is capital structure and its determinants? Explain the importance of capital structure and planning. (June 00)
OR
Q. "An appropriate capital structure reflects certain features", What are the features? Discuss briefly. (Dec. 01)
OR
What are the salient features of an appropriate capital structure? What are the main factors to be considered when a capital structure decision is taken? (June 99)

The Board of Directors or the financial manager of a company should always endeavor to develop a capital structure that would lie beneficial to the equity shareholders in particular and to the other groups such as employees, customers, creditors, society in general. While developing an appropriate capital structure for its company the financial manager should aim at maximizing the long-term market price per share. This can be done only when all these factors which are relevant to the company's capital structure decisions are properly analyzed and balanced.

An appropriate capital structure should incorporate the following features:

1. **Flexibility**: A sound capita1 structure, must be flexible. The consideration of flexibility gives the financial manager ability to alter the firm's capital structure with a minimum cost and delay warranted by a changed situation. It should also be possible for the company to provide funds whenever needed to finance its profitable activities.
2. **Profitability**: A sound capital structure is also one that also possesses the feature of profitability, i.e., it must be advantageous to the company. It should permit the maximum use of leverage at a minimum cost with the constraints. Thus a sound capital structure tends to minimize 'cost' of financing and maximize earnings per share (EPS).

3. **Solvency**: A sound capital structure should also have the feature of solvency, i.e., it should use the debt capital only up to the point where significant risk it not added. As has been already observed the use of excessive debt threatens the solvency of the company.

4. **Conservation**: The capital structure should be conservative in the sense that the debt capacity of the company should not exceed. The debt capacity of a company demands on its ability to generate future cash flows. It should have enough cash to pay creditors fixed charges and principal amount. It should be remembered that cash insolvency might also lead to legal insolvency.

5. **Control**: The capital structure should involve minimum risk of loss of control of the company.

A careful consideration of these criteria points the, conflicting nature. For example the use of debt capital is more economical but the same capital adds to the financial risk of the company. As such the emphasis given to each of the elements will differ from one company to another. Also the characteristic features of a company may consider these and additional criteria.

The various factors affecting the capital structure decision are:

1. Leverage or trading on equity
2. Sales Promotion
3. Management attitudes
4. Assets structure.
5. Cash Flow ability of a company
6. External environment such as the state of capital market, taxation policy, state regulations etc.
7. 'Other factors such as, the size of the business, age of the 'company credit standing, period of finance, lender attitude etc.

1. **Leverage or Trading on equity**: Trading on equity or leverage refers to the financial process. This enables the owners of a company to enhance their return on equity by borrowing funds for one rate of interest, and using the money to earn a higher rate of return, keeping the different for themselves. It is thus, called making money by using other people's money. Some of the main conclusions regarding the leverage in the capital structure such as use of fixed cost or fixed return sources of finances may be reemphasized. Debts and pre share capital results' into magnifying the earnings per share (EPS) prevailed the firm earns more on the assets purchased with these funds than the cost of their use. Earnings before interest and taxes (EBIT) and EPS relationship are the means to examine the effect of leverage. Out of per share capital and debt,' the leverage impact is felt more in the case of debt because their source of finance costs lower, than per share capital and also the interest payable on, debt is, tax deductible. The use of fixed cost sources of finances also adds to the financial risk of the company and, therefore, it should not be used beyond a point where the amount of fixed commitment charges equals the level of EBIT. To give, up because of its effect on EPS financial leverage is one the important consideration in planning the capital structure for the company.

2. **Sales Position**: Sales position covers growth rate of future sales and sales stability. The future growth of sales is a measure of the extent to which the earnings per share (EPS) of the rum are likely to be magnified by leverage. The greater the external financially that is usually required. This is so because the likely volatility and uncertainty of future sales have important influences upon the business risk the less equity that should be employed. Similarly, sales stability and debt ratios are directly related, that is, the greater the stability in sales and earnings the greater the debt that should be employed. It is because of this factor that public utilities employ more debt than equity because they are assured of their future sales and earnings.

3. **Management Attitudes**: Management's attitude concerning\c6ntrol of enterprise and risk, involved determine the debt or equity in the capital structure and any analysis of capital structure planning can hardly afford to ignore this factor. In fact every addition of equity unit in the capital structure presents management to participate in the company affairs to that extent. Therefore, while planning capital structure, firms may prefer debt to be assumed of continued control.

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4. **Assets Structure**: Composition and liquidity of assets may also influence the capital structure decision of the firm. Firms with long lived fixed assets, especially when demand for their output is relatively assured utilities for example - use long-term debt extensively similarly greater the liquidity the more debt that generally can be used all other factors remaining constant. The less liquid the assets of firm the less flexible the firm can be in meeting its fixed charged obligations.

5. **Cash flow ability of the company**: When considering the appropriate capital structure it is extremely important to analyze the cash flow ability of the firm to serve fixed commitment charges. The fixed commitment charges include payment of interest on debentures and other debts, preference dividend and principal amount. Thus the fixed charged depend upon both the amount of senior securities and the terms of payment. The amount of fixed charges will be high if the company employs a large amount of debt or preference capital with short-term maturity. It is therefore, prudent that for servicing fixed charges at proper time, the management must ensure the availability .of cash because inability on the part of management may result in financial insolvency. Therefore, cash flow analysis is essential to consider while planning appropriate capital structure. Obviously, the greater and more stable the expected future cash flows of the firm, the greater the debt capacity and vice-versa. To be on a safe side the cash flow ability must be determined in the period of depression very carefully.

6. **External Environment**: Any decision relating to the pattern of capital structure must be made keeping in view the external factors such as state of capital market, taxation policy, state regulations etc. If the capital market is likely to be planned in bearish state and interest rates are expected to decline the management should postponed the debt for the present in order to take advantage of' cheap debt at a larger stage. However, if debt will become costlier and will be on scarce supply owing to bullish trends of the capital market, the management may inject additional doses of debt in capital structure. Similarly, taxation policy with regard to the various sources of finance affects the capital structure decision of the company. The present taxation provisions are in favor of debt capital because interest payment on debt is a tax-deductible expense. On the contrary dividend payable on equity capital preference share capital is subject to tax state regulation is another exterior factor that must be taken into account while planning capital structure.

7**. Other Factors**: All the factors specified above are of crucial importance in matters of capital decision. Other factors such as the size of the company, age of the company credit standing of the company, period of finance, tender's attitude, capital structure decisions of competitors etc. are equally important. Smaller companies confront tremendous problem in raising fund and these companies have to pay higher interest on debt and have to agree to inconvenient terms of loan. These companies as a result are compelled to depend heavily on retained earnings and share capital. Similarly age of company plays an important role. New companies face a lot of uncertainty in the initial periods of operation, as they are completely unknown to the suppliers of funds. These companies are compelled to depend upon their own, sources of funds. Small firms or newly started funds have low standing in the market and they are compelled to pay a higher rate of interest on long-term debts. Similarly the period of finance should be paid due attention in the capital structure decision. When funds are required for permanent investment in a company, equity share to capital is preferred. When funds 'are required to finance modernization programs such as overhauling of machines and equipment and aggressive advertising campaign, the company can issue preference share and or debentures. Regardless of management analysis of proper leverage factor for their companies, there is no question but that lender's attitudes are frequently important and sometimes the most important determinant of capital structure. Before adopting a capital structure the management may discuss their with its prospective lenders if possible.1t is also prudent to know about the existing practices regarding the capital structure is radically different from its competitors, there is every need to give careful thought to this duration. Such a departure is unhealthy in the absence of compelling circumstances.

The above-listed factors and difference analysis would help the financial manager to determine within some range the appropriate capital structure. By necessity, the final decision regarding capital structure based on objective analysis supplemented with subjective intuitiveness of the management. In this way, the company shall be able to obtain a capital structure, which has direct influence on maximizing the wealth of shareholders.

Q.State the various factors that affect the capital structure of a company. (Dec. 02)
Please refer to the previous question for details.

Q. What is capital structure? Write down the features of an appropriate capital structure. (Dec. 00)
Please refer to the previous question for details.

Cost of Capital

Q. Write a short note on Cost of Capital (Dec. 02)
Measuring the cost of capital needs a separate treatment. Needless to say, it is desirable to minimize the cost of capital. Hence, cheaper sources should be preferred, other things remaining same.

The cost of a source of finance is the minimum return expected by its suppliers. The expected return depends on the degree of risk assumed. A high degree of risk is assumed by shareholders than debt-holders. Debt-holders get a fixed rate of interest but shareholder's dividend is not fixed. The loan of debt-holders is returned within a prescribed period, while shareholders can get back their capital only when the company is wound up. This leads one to conclude that debt is a cheaper source of funds than equity. The preference share capital is cheaper than equity capital, but is not as cheap as debt. However, a company should not employ a large amount of debt. Theoretically, a company should have a right mix of debt & equity so that its overall cost of capital is minimum.

Dividend Dicisions

Introduction

This chapter will acquaint you with the meaning, types and purposes of dividend. Dividend is a portion of the profits distributed to shareholders in a company and is usually expressed as a percentage of nominal value of shares. Dividends are often paid in cash, though in theory other forms also exist.

Dividend affects the mood of the present shareholders, it also influences the behaviour and response of prospective investors, stock exchanges and financial institutions because of its relationship with the worth of the company which in turn affects the market value of its shares. The decision regarding dividend is taken by the Board of Directors and is then recommended to the shareholders for their formal approval in the annual general meeting of the company.

Dividend out of Profits

Q."Dividend can be paid out of profits". Explain this statement. Will a company be justified in paying dividends when it has unwritten-off accumulated losses of the past? (Dec. 99)

The word dividend is derived from 'dividendum' which means total divisible sum. The expression dividend has two meanings. For an existing company, i.e., going concern, the dividend is the distribution of divisible profits by a joint stock company to its shareholders by way of return on their investments in the shares after complying with the provisions of the Companies Act and Articles of Association of the company. In the case of winding up, it means a division of the realised assets among the creditors and contributors according to their respective rights. The legal provisions as to dividends for a company as a going concern are summarised as under:

1. Dividends cannot be paid except out of profits. As such the payment of dividend is ruled out when there is loss except where the Central or State' Government has guaranteed the payment of dividends by the company (Section 205).

2. Dividend must be paid within 42 days of declaration (Section 207).

3. Dividend is payable only to a registered shareholder or on his order to his banker. However where a company has issued share warrants in pursuance of Section 114, dividend is to be paid to the bearer of such warrantor to his banker.

4. Articles normally provide (as Article 88 of. Table A) that dividends may be paid up in proportion to the amount paid up on each share (Section 93). In the absence .of such provision, dividends are payable on the nominal amount of each share and not on the amount paid. [Oak Bank Oil Company Vs. Crum (1882) & App. Cas. 65 H.L.]

5. No dividend is paid on calls-in-advance; it would be unjust if the same sum paid on shares carried interest and dividend at the same time.

6. Where calls are in arrears, the company can make provision in the articles prohibiting the payment of dividends on shares on which full amount has not been paid. Otherwise dividend is payable only on the amount actually paid up.

7. The amount of dividend payable to shareholders may be rounded off to the nearest rupees. Thus where such amount contains a part of a rupee consisting of paisa, then, if such part is fifty paisa or more, it shall be increased to one rupee and if such part is less than fifty paisa, it shall be ignored. .

Sources of dividend: There are three sources from which dividends may be declared, namely: (i) current year's profits, (ii) past profits remaining undistributed and (iii) moneys provided by Government.

Dividends out of current years profits: A company can declare dividend out of current year's profits only after providing for depreciation in accordance with the provisions of sub-section (2) of Section 205.

Dividends out of previous year's profits: A company can pay dividend out of the profits of any financial year(s) which falls after the commencement of Companies (Amendment) Act 1960 after providing for depreciation in accordance with those provisions and remaining undistributed.

The legal position is summarised as under:

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(1) Arrears of depreciation are to be considered only if dividend for any financial year is declared out of profits of any previous financial year or years falling after 28 December, 1960. '.

(2) If the company has incurred any loss in any previous financial year or years falling after 28th December, 1960, then

(a) the amount of loss; or
(b) an amount which is equal- to the amount provided for depreciation for that year or those years, whichever is less, shall be set off:

(i) against the profits of the company for the year for which the dividend is proposed to be declared or paid; or
(ii) against the profits of the company for any previous financial year or years arrived at after providing for the prescribed depreciation as per Section 205 (2); or .
(iii) against the aggregate of (i) and (ii) together.

(3) The Central Government may, if it thinks necessary to do so in the public interest, allow any company to declare or pay dividend for any financial year out of the profits of the company for that year or years or any financial year without providing for depreciation.

(4) It shall not be necessary for the company to provide for arrears of depreciation where dividend for any financial year is declared or paid out of profits of any previous financial year or years which falls or fall before 28 December, 1960.

(5) Dividends can be declared out of the aggregate of the profits of the current year and previous year(s).

Dividend out of subsidy: Where the Central or State Government has guaranteed the payment of dividend by the company, dividend may be paid out of money provided by such Government.

DIVIDENDS OUT OF RESERVES

In case of inadequacy or absence of profits in any year, a company can declare and pay dividends by withdrawing amount out of reserves. It is clear that only revenue reserves, which are free and uncommitted, can be used for this purpose. Section 205 A (3) inserted by Companies (Amendment) Act, 1974, provides that declaration of dividends out of the accumulated profits earned by the company in previous years and transferred by it to the reserves cannot be made in case of inadequacy or absence of profits in any year, except in accordance with the prescribed rules or in special cases with the previous approval of the Central Government. The prescribed rules framed by the Central Government in this respect are known as the Companies (Declaration of Dividend out of Reserves) Rules, 1975. Rule 2 provides that in the event of inadequacy or in the absence of profits in any year, dividend may be declared by a company for that year out of the accumulated profits earned by it in the previous year and transferred by it to the reserves, subject to the conditions that:

a. The rate of dividend shall not exceed the average of the rates at which dividend was declared by it in the five years immediately preceding that year or 10 per cent of its paid up capital, whichever is less;

b. The total amount to be drawn from the accumulated profits earned in previous years and transferred to the reserves shall not exceed an amount equal to one tenth of the sum of its paid up capital and free reserves and the amount so drawn shall first be utilised to set off the losses in the financial year before any dividend in respect of preference or equity shares is declared; and

c. The balance of reserves after such draw shall not fall below 15 per cent of its paid up capital. Explanation: For the purpose of the rules, profit earned by a company in previous years and transferred by it to the 'reserves' shall mean the total amount of net profits after tax, transferred to reserves as at the beginning of the year for which the dividend is to be declared; and in computing the said amount, the appropriations out of the amount transferred from the Development Rebate Reserve (at the expiry of the period specified under the Income Tax Act, 1961) shall be included and all items of capital reserves including reserves created by revaluation of assets shall be excluded.

It would be noticed that Section 205 (3) imposes restrictions' on the payment of dividends out of reserves only and not out of the accumulated profits carried forward in the profit and loss account (without being transferred to reserves). There seems to be no basis for such discrimination and the omission may be regarded merely accidental. Otherwise, this lacuna in the drafting of this new section would defeat the purpose for which it appears to have been incorporated.

Dividend Policy Goals

Q. "While formulating a dividend policy, the management has to reconcile company's need for funds with the expectations of the shareholders." Elaborate this statement and state the policy goals which have to be kept in view by the management while taking a decision on dividends. (Dec. 02)

The objective of corporate management is to maximize the market value of the enterprise. The market value of common stock of a company is influenced by its policy regarding allocation of net earnings into "plough back" & "payout". While maximizing the market value of shares, the dividend policy should be so oriented as to satisfy the interests of the existing shareholders as well as to attract the potential investors. Thus, the aim should be to maximize the present value of future dividends and the appreciation in the market price of shares.

Dividend Policy Goals

- Dividend policy should be analyzed in terms of its effect on the value of the company.

- Investment by the company in new profitable opportunities creates value and when a company foregoes an attractive investment, shareholders incur an opportunity loss.
- Dividend, investment, & financing decisions are interdependent and there is often a trade off.
- Dividend decision should not be considered as a short run residual decision.
- Whatever dividend policy is adopted by the company, the general principles guiding the dividend policy should be communicated clearly to investors.
- Erratic & frequent changes in dividends should be avoided. Reduction in the rate of dividend is painful thing for the shareholders to bear.

Role of Finance Manager

Q. Discuss the role of the financial manager in the matter of dividend policy. What alternative might he consider and what factors should he take into consideration before finalizing his views on dividend policy. (June 00)

The disposal of the earnings is an issue of fundamental importance in financial management. The financial manager plays a key role in advising the management, i.e., Board of Directors regarding the decision. It is the latter whose privilege it is to take the decision. The retention of profits in business helps the company in mobilizing funds for expansion.
The dividend policy, particularly the timing of the declaration of dividend, influences the market value of a company's shares. The financial manager, therefore, should be well informed about the capital market trends and the tax policies of the government, besides the rationale behind the investment programme of the company.

The dividend alternatives available to finance manager while deciding the dividend decision are listed below:

- **Regular Dividend**: If the company gives dividend every year right from the initial year of operation, it is called regular dividend.
- **Stable Dividend**: Whether equal amount or a fixed % of dividend paid every year, irrespective of the quantum of earnings as in case of preference shares, i.e., stable dividend.
- **Fixed Payout Ratio**: When a fix payout ratio is decided on the total of earning available is called fixed payout ratio.

- **Bonus Shares or Property Dividend**: In this case, the company issues bonus shares.

What factors should he take into consideration before finalizing his views on dividend policy?

- Please refer to the next question for details.

Factors Affecting Dividend Decision

Q.What factors could a company in general consider before it takes a decision on dividends? (June 01)

The dividend decision is difficult decision because of conflicting objectives and also because of lack of specific decision-making techniques. It is not easy to lay down an optimum dividend policy which would maximize the long-run wealth of the shareholders.

The factors affecting dividend policy are grouped into two broad categories.

1. Ownership considerations
2. Firm-oriented considerations

Ownership considerations: Where ownership is concentrated in few people, there are no problems in identifying ownership interests. However, if ownership is decentralized on a wide spectrum, the identification of their interests becomes difficult.

Various groups of shareholders may have different desires and objectives. Investors gravitate to those companies which combine the mix of growth and desired dividends.
Firm-oriented considerations: Ownership interests alone may not determine the dividend policy. A firm's needs are also an important consideration, which include the following:

- Contractual and legal restrictions
- Liquidity, credit-standing and working capital
- Needs of funds for immediate or future expansion
- Availability of external capital.
- Risk of losing control of organization
- Relative cost of external funds
- Business cycles
- Post dividend policies and stockholder relationships.

The following factors affect the shaping of a dividend policy:

Nature of Business: Companies with unstable earnings adopt dividend policies which are different from those which have steady earnings.

Composition of Shareholding: In the case of a closely held company, the personal objectives of the directors and of a majority of shareholders may govern the decision. To the contrary, widely held companies may take a dividend decision with a greater sense of responsibility by adopting a more formal and scientific approach.

Investment Opportunities: Many companies retain earnings to facilitate planned expansion. Companies with low credit ratings may feel that they may not be able to sell their securities for raising necessary finance they would need for future expansion. So, they may adopt a policy for retaining larger portion of earnings.

Similarly, is a company has lucrative opportunities for investing its funds and can earn a rate which is higher than its cost of capital, it may adopt a conservative dividend policy. Liquidity: This is an important factor. There are companies, which are profitable but cannot generate sufficient cash, since profits are to be reinvested in fixed assets and working capital to boost sales.

Restrictions by Financial Institutions: Sometimes financial institutions which grant long-term loans to a company put a clause restricting dividend payment till the loan or a substantial part of it is repaid.

Inflation: In period of inflation, funds generated from depreciation may not be adequate to replace worn out equipment. Under inflationary situation, the firm has to depend upon retained earnings as a source of funds to make up for the shortfall. Consequently, the dividend pay out ratio will tend to be low.

Other factors: Age of the company has some effect on the dividend decision.
The demand for capital expenditure, money supply, etc., undergo great oscillations during the different stages of a business cycle. As a result, dividend policies may fluctuate from time to time.

Q. Narrate the role of computers in accounting. (June 03)

Computers are probably the only tool available that can help us in storage and organization of data and information. Today computer industry is the biggest industry worldwide and has a great impact on the society. The computers became popular because of the following features:

- Speed
- Reliability
- Diligence
- Versatility
- Large memory.

Role of computers in accounting & Business organizations

Help in Operations: Computers help in various accounting operations like invoicing, calculation of wages, maintaining ledger, etc.

Help in Controlling: With the help of computers, a business concern can have better control over its operation. They help in budgetary control, sales analysis, credit control, etc.

A computer can process almost any type of information required by a business. Some areas where computers are most popular are listed below:

- Inventory control
- System analysis
- Inventory control
- Sales accounting
- Market research
- Purchase accounting
- Planning & control
- Quality control
- Management accounting

Q. Examine the utility of available software for performing accounting and finance functions. Put forth your suggestions for an ideal computerized system of accounting & finance. (June 03)

The modern age is called the "Computer Age" or "Information Age" because computers are becoming very popular. People use computers in a wide variety of ways. In business, computers track inventories with bar codes and scanners, check the credit status of customers, and transfer funds electronically. In homes, tiny computers embedded in the electronic circuitry of most appliances control the indoor temperature, operate home security systems, tell the time, and turn videocassette recorders on and off. Computers in automobiles regulate the flow of fuel, thereby increasing gas mileage. Computers also entertain, creating digitized sound on stereo systems or computer-animated features from a digitally encoded laser disc. Computer programs, or applications, exist to aid every level of education, from programs that teach simple addition or sentence construction to programs that teach advanced calculus. Educators use computers to track grades and prepare notes; with computer-controlled projection units, they can add graphics, sound, and animation to their lectures. Computers are used extensively in scientific research to solve mathematical problems, display complicated data, or model systems that are too costly or impractical to build, such as testing the air flow around the next generation of space shuttles. The military employs computers in sophisticated communications to encode and unscramble messages, and to keep track of personnel and supplies.

The computers have become popular because of:

- Speed
- Reliability
- Diligence
- Versatility
- Large memory.

There are many softwares available in the market for the purpose of maintaining accounts such as TALLY, BUSSY, Account Manager, etc. The most widely accepted is the TALLY. TALLY provides the following functions for accounting procedure:

- Maintaining ledger & journals
- Preparing balance sheet, profit & loss a/c.
- Ratio Analysis
- Maintaining funds & cash flow statement
- Preparing reports

Ideal computerized system of accounting & finance must be able to perform following functions:

- Generating reports
- Fast access of accounts
- Comparison of records
- Easy maintenance
- Flexible
- Cheap
- Should have some artificial intelligence
- Secure
- Forecasting should be allowed
- Record processing should be easy

Q. Explain the latest and other important sources of long-term and short-term financing. (June 02)

Following are some long-term & short-term sources of financing for a business:

Long-term sources

Shares: It is the most important source for raising permanent or long-term capital. Section 86 of Companies Act, 1956 provides that share capital of a company formed after April 1, 1956 or the share capital issued after that date, shall be of only two kinds, viz. Preference share capital and equity share capital.

Preference shares: According to Section 85 of The Companies Act, 1956, a preference share is one, which fulfills the following conditions:

a. A preference share has a preferential right to dividend to be paid either as a fixed amount or an amount calculated by a fixed rate which may be either free of or subject to income tax.

b. A preference share has the right to the repayment of capital before any thing is paid to equity shareholders on the winding up of the company.

Equity Shares: According to Section 85 of The Companies Act, 1956, an equity share is a share which is not a preference share.

Equity shares entitle to whole of the profits earned by the company, after a fixed dividend on preference shares that has been paid by it, are equity shares. Equity shares have no right to either a fixed dividend or repayment of a pre-determined amount of capital in the event of winding of the company.

Debentures: When a company desires to borrow a considerable sum of money for its expansion, it invites the general public to subscribe to its debentures. A debenture is a certificate issued by the company acknowledging the debt due by it to its holders and is issued by means of a prospectus in the same manner as shares. The following are the various types of debentures issued by a company: Simple or naked Debentures, Secured and Mortgage Debentures, Redeemable Debentures, Perpetual or Irredeemable Debentures, Convertible Debentures, Non-Convertible Debentures.

Public Deposits: Public deposits are the fixed deposits accepted by a business enterprise directly from the public. This source of raising short-term & medium finance was very popular in absence of banking facilities. Public deposits have several advantages such as simple & convenient source of finance taxation benefits, trading on equity, no need of securities and an inexpensive source of finance.

Ploughing back of profits: It means reinvestment by concern of its surplus earnings in the business. It is an internal source of finance & is suitable for an established firm for its expansion, replacement, etc.

Loans from Financial Institutions: Several financial institutions like LIC, State Finance Corporation, Industrial Development bank, etc. also provide loans. This source is more suitable for medium term demands of working capital. Interest is charged at fixed rate on these loans.

Short-term Sources

Trade Credit: It is the credit extended by the suppliers of goods in the normal course of business. It is an important source of short-term finance. The credit-worthiness of the firm and the confidence of its suppliers are the main basis of securing trade-credit.
Advance payment: Some business houses get advances from their customers and agents. It is a cheap source of finance.

Installment Credit: In this method assets are purchased and the possession of goods is taken immediately but the payment is made in installments. Generally, interest is charged on the unpaid amount.

Commercial Paper: It represents unsecured promissory notes issued by firms to raise short-term funds. In India only large companies enjoy high credit rating & can issue commercial paper to raise short-term funds.

Deferred Income: These are incomes received in advance before supplying goods or providing services.

Q. What do you understand by Cash Flow Statement? What are the broad headings and important sub-classifications to be incorporated under as per accounting standard? (June 03)

A Cash Flow Statement is similar to the Funds Flow Statement, but while preparing funds flow statement all the current assets and current liabilities are taken into consideration. But in a cash flow statement only those sources of funds are taken which provide cash and only the uses of cash are taken into consideration, even liquid asset like Debtors and Bills Receivables are ignored.

A Cash Flow Statement is a statement, which summarizes the resources of cash available to finance the activities of a business enterprise and the uses for which such resources have been used during a particular period of time. Any transaction, which increases the amount of cash, is a source of cash and any transaction, which decreases the amount of cash, is an application of cash.

Cash Flow Statement
for the year ending----

	Rs.	Rs.
A. Cash flow from Operating Activities:		
Net profit before tax and extraordinary items	------	
Adjustment for:		

Depreciation	------	
Loss on sale of fixed assets	------	
Gain on sale of fixed assets	(------)	
Interest paid	------	
Interest received	(------)	
Dividend received	(------)	
Operating profit before working capital changes	------	
Add: Decrease in Current Assets ------		
Increase in Current Liabilities ------	------	

Less: Increase in Current Assets ------		
Decrease in Current Liabilities ------	(------)	
Cash generated from operating activities	------	
Income Tax Paid	------	

Cash flow from before extraordinary items	------	
(+) or (-) Extraordinary items	------	------
Net cash from operating activities		------
B. Cash flows from Investing Activities:	------	
Purchase of fixed assets	------	
Sale of fixed assets	------	
Purchase of Investment (long-term)	------	
Sale of Investment (long-term)	------	
Net cash from investing activities		------
C. Cash flows from Financial Activities:	------	
Proceeds from issue of share capital	------	
Proceeds from long-term borrowing	------	
Repayment or long-term borrowings	------	
Net cash from financing activities	------	------
Net Increase (or decrease) in cash and cash equivalents (A + B + C)		------
Cash and cash equivalents at the beginning		------
Cash and cash equivalents at the end		------

Q. Elucidate the various cost reduction techniques, highlighting the importance of cost reduction under the present scenario. How is it different from cost control? (June 02)
Cost accounting is concerned with:

- Ascertaining the costs
- Controlling the costs
- Reducing the costs

Cost reduction is different than cost control methods.
These may involve the following:

- More production in a specified time. Thus cost pert unit will be less.
- More production with the available work force

- Optimum utilization of plant and machinery

The main idea behind the cost reduction technique is to reduce cost of production per unit of a product. Cost reduction techniques to reduce material costs are inventory control techniques. These include EOQ (Economic Order Quantity) which reduces inventory-carrying costs. Queuing technique help in optimum utilization of plant & machinery.

Difference between Cost Controlling & Cost Reduction Techniques

Both are part of cost accounting. The former starts before production starts, but the latter takes place during the production process. Cost control can be applied to direct cost only but cost reduction techniques can be applied for both direct & indirect costs. Cost control is used in direct labour costs, by choosing minimum labour for desired production. Cost reduction techniques will see that the labour is used for obtaining more than targeted production.

Q. Write short notes on the following:

- Accounting for price level changes (June 02)
- Shareholder's Funds. (Dec. 02)

Accounting for price level changes (June 02)

Price level changes often make the comparison of figures difficult over a period of time. Due to rising prices, the value of fixed assets continuously increases year after year. In such cases if any comparison is to be made, then proper adjustments for price level must be made. The assets acquired at different times are shown at the historical costs, as a result the financial analysis will not yield dependable results. A change in the price affects the validity of ratios calculated for different times.

Similarly, there may be two firms- one having purchased the assets at a lower price and another at a higher price. Return on investment calculated for these firms will differ substantially. The firm which purchased the assets at lower price, will show a higher rate of return than the firm which purchased the assets at a higher price. Therefore, results of inter-firm comparison may also not be dependable.

Shareholder's Funds. (Dec. 02)

Shareholder funds includes Share Capital (Equity + Preference) + Reserves and Surplus – Fictitious Assets. Shareholders funds is termed as a liability of the company and is shown on the liability side of balance sheet.

Q. How will you compute return on capital employed? Explain with the help of imaginary figures, taking items of Profit & Loss acount and Balance sheet (June 03)

This ratio shows the relationship between the profit earned before interest and tax and the capital employed to earn such profit.

$$\text{Return on Capital Employed} = \frac{\text{Net Profit before Interest, Tax and Dividend}}{\text{Capital Employed}} \times 100$$

Where Capital Employed = Share Capital (Equity + Preference) + Reserves and Surplus + Long-term Loans – Fictitious Assets

Or

Capital Employed = Fixed Assets + Current Assets – Current Liabilities

Objective and Significance: Return on capital employed measures the profit, which a firm earns on investing a unit of capital. The profit being the net result of all operations, the return on capital expresses all efficiencies and inefficiencies of a business. This ratio has a great importance to the shareholders and investors and also to management. To shareholders it indicates how much their capital is earning and to the management as to how efficiently it has been working.
This ratio influences the market price of the shares.
The higher the ratio, the better it is.

Example: Following is the Balance Sheet of Wye Ltd. as on December 31, 2004:

Liabilities	Rs.	Assets	Rs.
Share Capital	20,00,000	Fixed Assets (Net)	29,00,000
Reserves	5,00,000	Current Assets	25,00,000
10% Loans	10,00,000	Underwriting Commission	1,00,000
Current Liabilities	15,00,000		
Profit for the year	5,00,000		
	55,00,000		**55,00,000**

Find out the Return on Investment (Return on capital employed).

$$\text{Return on Investment} = \frac{\text{Net Profit before Interest and Tax}}{\text{Capital Employed}} \times 100$$

$$= \frac{\text{Rs. } 6,00,000}{\text{Rs. } 39,00,000} \times 100 = 15.4\%$$

Workings

Net Profit before Interest = Rs. 5,00,000 + Rs. 1,00,000 (Interest on Loan) = Rs. 6,00,000

Capital Employed = Fixed Assets + Current Asset – Current Liabilities

= Rs. 29,00,00 + Rs. 25,00,000 – Rs. 15,00,000 = Rs. 39,00,000

Or

Capital Employed = Share Capital + Reserves and Surplus + Long-term Loans – Fictitious Assets

= Rs. 20,00,000 + Rs. 5,00,000 + Rs. 5,00,000 + Rs. 10,00,000 – Rs. 1,00,000 = Rs. 39,00,000

Miscellaneous Questions

Q. Anil invested Rs. 40,000 of his own in a florist shop and borrowed another Rs. 20,000 from a bank for business use. At the end of first year of operations, he found Rs. 72,000 in his shop's bank account. He owed his suppliers Rs. 12,000 and had not repaid the bank loan. He had no other business assets other than cash. During the year he paid himself a salary of Rs. 24,000

i) What conclusions would you draw from his first year's operations?
ii) For what decisions could this information be used?

Solution

Statement of affairs of Mr. Anil

Liabilities	Amount	Assets	Amount
Capital (bal fig.)	40000	Cash at bank	72,000
Creditors	12000		
bank loan	20,000		
	72000		**72000**

Statement showing profit or loss

Capital at the end	40,000
Add: Drawings	24,000

	64,000
Less: Capital at beginning	40,000
Profit	**24,000**

(i) In the first year anil has earned a profit of Rs. 24,000
(ii) This type of information is useful in preparing financial accounts, balance sheet, calculating ratios, etc., Earnings information is useful because it helps in measuring the achievement of the business. It helps in identifying the problems currently by the firm.

Q. Regent Ltd. has a sales revenue of Rs. 10,000 and depreciation for the period is Rs 2,000. The other expenses are Rs 9,000.
(1) What would be the net loss for the period ?
(2) What is the amount of funds generated from operations during the period ?
(3) Under what circumstances can the funds from operations be zero ?

Solution:**(i)**

Sales revenue	10,000
Less: Operating expenses	9,000
Contribution	1,000
Less: Depreciation	2,000
Net loss	(1,000)

(ii) Funds from operation = Net loss + Depreciation
= (1,000) + 2,000
= Rs. 1,000

(iii) Funds from operation can be zero when the operating expenses excluding depreciation are equal to sales revenue.