



SYLLABUS

Class – B.Com (Hons.) III Year

Subject – Management Accounting

UNIT – I	Management Accounting: Meaning, nature, scope and functions of management accounting, Role of management accounting in decision making management accounting v/s financial accounting and cost accounting, tools and techniques of management accounting.
UNIT – II	Financial statement: Meaning and types financial statement; limitations of financial statement. Objectives and method of financial statement analysis; Ratio analysis, classification of ratios- profitability ratios, turnover ratios and financial ratios, advantages of ratio analysis, limitations of accounting ratios. Funds flow Statement, Cash Flow Statement as per AS-3
UNIT – III	Process Cost Concepts Types and Method, Standard cost- variance analysis, Concept and types.
UNIT – IV	Marginal costing: Marginal Costing as tool for decision making- make or buy; change of product mix
UNIT – V	Budgetary Control; Management reports, types of reports, quality of good report



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**Subject: Management and Accounting
UNIT-I**

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SUBJECT: Management

Accounting

What is Management Accounting?

Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation and communication of financial information used by management to plan, evaluate and control within an organization and to assure appropriate use of and accountability for its resources. Management accounting also comprises of preparation of the financial reports for management groups such as shareholders, creditors, regulating agencies and tax authorities.

Management accounting thus is the process of

1. **Identification** – the recognition and evaluation of business transactions and other economic events for appropriate accounting action.
2. **Measurement** – the qualification including estimates of business transactions or other economic events that have occurred or may occur.
3. **Accumulation** – the disciplined and consistent approach to recording and classifying appropriate business transactions and other economic events.
4. **Analysis** – the determination of resources for, and the relationships of the reported activity with other economic events and circumstances.
5. **Preparation and Interpretation** – the meaningful coordination of accounting and/or planning data to identify need of information, presented in a logical format, and if appropriate, including conclusions drawn from those data.
6. **Communication** – the reporting of pertinent information to management and others for internal and external uses.

Management accounting is used by management to :

1. **Plan** – to gain an understanding of expected business transactions and other economic events and their impact on the organization.
2. **Evaluate** – to judge the implications of various past and/or future events.
3. **Control** – to insure the integrity of financial information concerning to an organization or its resources.
4. **Assure accountability** – to implement the system of reporting that is closely aligned to organizational responsibilities and that contributes to the effective measurement of management performance.

The essence of the management process is decision making. Decision making is an unavoidable and continuous management activity. It may be directed towards some specific objectives, or it may result as a reaction of environmental factors as they occur. An enterprise would operate successfully if it does not simply react to events, rather it directs its efforts toward the accomplishment of desired purposes. Objectives tend to make decisions purposeful to the firm. The decision making process should be both efficient and effective. It would be effective when management's objectives are achieved. The decision making system is said to be efficient when objectives are realized with the minimum use of resources.

The process of decision making involves two basic management functions, of planning and controlling. As discussed in the previous section, management accounting accumulates, measures and reports relevant information in such a way that planning and control functions of management are facilitated.

NATURE OR CHARACTERISTICS OF MANAGEMENT ACCOUNTING

The nature and main characteristics of management accounting are as follows:

1. **Both as a Science and an art:** In management accounting data are collected systematically and they are analysed with the help of various formulae and techniques and on this basis it is a science. On the other hand, subjective judgment of management and various needs of the



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organization are also taken into account while taking decisions and on this basis it is an art. As a whole, management accounting is both- a science as well as an art.

2. **Accounting Service:** Management accounting is a function of accounting service towards management. Under this service, necessary informations are provided to various levels of management.
3. **Integrated System:** Management accounting is an integrated system in which technique related to various subjects are used in the process of data collection, analysis and decision-making.
4. **More concerned with Future:** Management accounting is more concerned with 'future'. No doubt, analysis and interpretation are made on the basis of historical data, but the important objective of management accounting is to determine policies for future.
5. **Selective Nature:** Management accounting is selective in nature. It selects only those plans or alternative which seems to be more attractive and profitable.
6. **More Emphasis on the Nature of Element of Cost:** Management accounting lays more emphasis on the recognition and study of the nature of various elements of cost. In this context the total cost is divided into fixed, variable and semi-variable components.
7. **Cause and Effect Analysis:** Management accounting lays emphasis on the analysis of 'cause' and 'effect' of different variables.
8. **Rules are not Precise and Universal:** In management accounting no set of rules or standards are followed universally. Though the tools of management accounting are the same, their usage differs from concern to concern.
9. **Supplies Information and not decision:** An important nature of management accounting is that it provides requisite information and not decisions. However, decisions are taken by management with the help of these informations.
10. **Achieving of Objectives:** In management accounting, the accounting information is used in such a way so that organizational objectives and targets may be achieved and efficiency of business may be improved.

Objectives of Management Accounting

The fundamental objective of management accounting is to enable management to maximize profits or minimize losses. Following are the important objectives or purposes of management accounting:

1. **Policy formulation-** Policy formulation and planning are the primary functions of management. The objective of management accounting is to supply necessary data to the management for formulating plans. The figure supplied and opinion given by the management accountant helps management in policy formulation.
2. **Helpful in decision making-** The management is required to take various important decisions. Management accounting techniques help in collecting and analyzing data relating to cost, volume and profit which provide a base for taking sound decision.
3. **Helpful in controlling-** Management accounting is a useful device of managerial control. Various accounting techniques such as standard costing and budgetary control are useful in controlling performance. The actual results are compared with pre-determined targets to know the deviations.
4. **Motivation-** Another important objective of management accounting is to help the management in selecting best alternatives of doing things. Delegation of authority as well as responsibility increases the job satisfaction of employees and encourages them to look forward.
5. **Interpretation of financial information-** Financial information is of technical nature and must be presented in such a way that it can be easily understood. It is the duty of management accountant who uses statistical devices like charts, diagrams etc. so that the information can be easily understood.
6. **Reporting-** One of the primary objectives of management is to be fully informed about the latest position of the concern. Management accounting provides data as well as different alternative plans before the management for comparative study. The performance of various departments is also communicated regularly to the top management.



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7. **Helpful in co-ordination-** Management accounting provides tools which are helpful for this purposes. Co-ordination is maintained through functional budgeting. It is the duty of management accounting to act as a coordinator and reconcile the activities of different department.

SCOPE OF MANAGEMENT ACCOUNTING :

The scope of management accounting covers all the tools and techniques which help the management in effective discharge of their functions. The scope, therefore is very wide and broad based, covering mainly the following aspects of management accounting.

- (i) **Financial Accounting :** Financial accounting provides the data base on the basis of which management accounting processes information to the management to serve their needs. Proper designed financial accounting system forms the very base on which management accounting prepares relevant and analytical report to facilitate management decision making. Management accounting assembles and presents the financial accounting data in meaningful terms for resolution of managerial issues. Hence, without the support of Financial Accounting feeding system, management accounting functions are not possible.
- (ii) **Cost Accounting :** Cost accounting provides the most sophisticated techniques of Marginal Costing, Budgetary Control, Standard Costing, Inter firm comparison which enables Management Accounting to provide necessary information for effective decision making and control. Cost accounting helps in performance appraisal and formulation of pricing policies with costing information. It is, in fact the integral arm of management, without the support system of costing accounting, the inefficiencies in various operations can not be highlighted to management.
- (iii) **Tools and Techniques of Management control :** Management accounting makes a detailed analysis and interpretation of financial statements through the tools of comparative statements, trend ratios, ratio analysis and fund flow statement. Accounting Ratios help in the evaluation of operating performance and in judging the liquidity and solvency of the enterprise. Fund flow statement focuses on the management of funds in the operations of the business variance analysis aims at controlling the various elements of costs, reporting the adverse variation for management action.
- (iv) **Statistical and Quantitative Techniques:** A number of statistical tools and technique is like linear programming, regression analysis facilitates in providing information in a meaningful manner for effective control and decision making. Hence management accounting also includes these techniques in its scope.
- (v) **Inflation Accounting:** This is also referred as revaluation accounting which is concerned in maintaining capital in real terms and accordingly profit is calculated. This involves the exercise of revaluing the assets at current prices and shows the increase/decrease in the value of capital. On the assumption that the monetary unit value is unstable; the impact on capital is ascertained as a result of changes in value of money. This is therefore another technique which falls within the orbit of management accounting.
- (vi) **Tax Accounting:** Tax planning is another important area which has a serious impact on the profitability of the concern. Without proper planning of tax, the profits of the enterprise are hijacked which affects adversely the business operations. Hence, it is an important activity of management accounting.
- (vii) **Management Reporting:** Management report forms the integral aspect of management accounting system. They identify the areas where management attention is desired for corrective action. Decision making is facilitated based on the information provided by the report. The reports should portray all the relevant aspects concerning the operative efficiency of the business. Report have to be well designed and frequent to help the management. This is an essential part of management accounting.

FUNCTIONS OF MANAGEMENT ACCOUNTING :

The basic functions of management accounting is to furnish relevant information along with analytical data to the management to enable timely decisions for appropriate actions. It helps in the



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effective discharge of management functions of planning, organizing, directing and controlling. The following are the main functions of management accounting.

- (a) **Furnishing of relevant and vital data** : Relevant and vital data is collected from concerned sources and presented through meaningful reports to management which facilitates decision making. Accounting data provides a strong base for furnishing financial figures to management to enable appropriate and timely action.
 - (b) **Compilation of data in suitable form** : Accounting data as it may not serve a meaningful and useful purpose to management for decision making. This data is required to be suitably modified and amended in manner that suits the management purpose. Hence the data is classified and rearranged in a way that helps the management to gain insight into the situation.
 - (c) **Analysis and Interpretation** : Management accounting provides the tools and techniques for analysis and interpretation of data. Information is furnished in a comparable and analytical manner for easy grasp of the situation. This facilitates planning and decision making.
 - (d) **Means of communication and reporting** : Management accounting system constitutes an important segment of the management communication system providing information and guidance for prospective planning and control. Reports are well prepared and presentation makes the management more effective in controlling business operations. It helps in co-ordinating the operations of various department.
 - (e) **Facilitates control function** : Management accounting helps in control function through the techniques of budgeting control and standard costing. These techniques enable comparison of actual performance with the targets and standards set analysis of the deviations from such standards, taking corrective action as a result of analysis and follow up to appraise the effectiveness of corrective action.
 - (f) **Planning** : Planning involves determination of different courses of actions based on this purpose facts and considered estimates. It helps in planning the strategy to be adopted in achieving the targets. It renders necessary help in planning for future the business goals and objectives.
 - (g) **Guides the management in judgment**: It assists the management in forming its judgment about the financial condition or the profitability of the business operation. Suitable action can be taken in laying down future plans and policies for improvement and advancement.
 - (h) **Decision - making** : Decision making is a management process of making right choices amongst the various courses of action. Decision can be taken only when the data is assembled and presented in meaningful terms and the areas requiring management attention are highlighted. Management accounting makes this decision making more effective.
1. Reporting is usually at the end of the year; when the events have already taken place for which nothing can be done.
 2. Financial accounting offers a macro view of the entire activities of the organization; it shows the results of the business as a whole without showing the results of the individual departments or products. Hence there is a fusion of all positive and negative results culminating into one result.
 3. Financial accounting is subject to statutory audit which is compulsory as per the provisions of the Companies Act, 1956. Management Accounting is not subject to any such statutory audit.
 4. Financial accounting considers only the monetary aspect. Management accounting considers both the monetary as well as non monetary aspects.

ROLE OR IMPORTANCE OR SIGNIFICANCE OF MANAGEMENT ACCOUNTING OR

MANAGEMENT ACCOUNTING AS A TOOL OF MANAGEMENT

In the present complex business world, management accounting has become an integral part and useful tool of management system. The report prepared and data edited on the basis of management accounting become the foundation of successful operation of managerial activities. The role of management accounting as a tool of management can be studied under following headings:

1. **Increase in Efficiency**: Management accounting increases efficiency of various business



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activities. The targets of different departments are fixed in advance on the basis of forecasting and planning and later on actual performance is compared with them. This process helps in measuring and increasing the efficiency of the enterprise.

2. **Proper Planning:** Planning is a primary function of management and management accounting has an important role in making it proper. Management is able to plan various activities with the help of accounting information. On the basis of information provided by management accountant, the work-load of each and every individual is fixed in advance and the activities of the concern are planned in a systematic manner.
3. **Measurement of Performance:** Management accounting also plays an important role in measurement and management of work performance through the techniques of standard costing and budgetary control.
4. **Effective Management Control:** Efficiency of management depends upon its effective control and from this point of view, management accounting has its specific role. Nowadays the function of control has become a continuous process.
5. **Improved Services to Customers:** The installation of various types of control through management accounting leads to reduction in cost and price and maintenance of standard level of quality of goods produced and services rendered.
6. **Maximizing Profits:** The thrust of various techniques of management accounting is to control cost of production and to increase operational efficiency. Everything results in maximizing the profits.
7. **Prompt and Correct Decision:** Management accounting provides continuous information and analysis to various levels of management in respect of various aspects of business operations. It helps in prompt and correct decision by management.
8. **Reduction in Business Risks:** The collection and analysis of historical information in management accounting provides knowledge to the management with respect to nature of fluctuations and their causes and effects. Management can prepare such plans which may minimize the impact of trade cycle or seasonal fluctuations and consequently reduction in various types of business risks.

LIMITATIONS OF MANAGEMENT ACCOUNTING:

Management accounting is not free from limitations:

1. **Data Base :** Management accounting depends for data on the financial and cost records. If the financial and cost accounting contains incorrect and inaccurate information management accounting also gets affected to that extent. Discrepancies of financial and cost accounting penetrates into the management accounting system giving unreliable results. Therefore, effectiveness of management accounting system depends upon the efficiency of system followed for recording and compiling financial and cost records.
2. **Intuitive Decision making:** Most of the times management is prone to take decisions without reference to information provided by management accounting system. They are tempted to take decision in an easy and short cut manner rather than on scientific basis. Their decision may be based on mere guess work and ignore the information provided by management accounting system.
3. **Absence of Objectivity:** Management accounting provides both qualitative and quantitative information which offers scope for subjective element. The report are therefore influenced by opinion judgment based on personal bias and prejudice. These make the reports more subjective rather than objective.
4. **Developing discipline:** Management accounting is still a new and developing. It has yet to sharpen its tools and techniques and seek perfection in its application. As a evolving discipline it is subject to certain obstacles and impediments which are to be cleared before it emerges as a fully developed science.
5. **Expensive proposition:** It is an expensive proposition to install the system with necessary facilities and highly skilled persons. Therefore, small concerns cannot afford to adopt it. Only large concerns can taken advantage of it where the benefits outweigh the cost in many ways.



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6. **Wide scope:** Management accounting embraces many disciplines and its scope is very wide. Hence it requires a through knowledge and understanding of many subjects to make the data more meaningful and informative. This makes the task of management accounting difficult.
7. **Resistance:** This subject demands a change in the method and style of working which may meet opposition and non co-operation from certain vested interests. It may be construed by some persons as a tool for their exploitation. They dislike being guided in decision making through scientific approach. Proper education of the system is necessary to help them break away from the traditional style of working.
8. **Cannot replace Management:** Management accounting with all its tools and techniques can only facilitate decision making process for the management. It cannot be treated as an alternative or substitute for management. Ultimately it depends on the management for execution. Therefore, it is only a tool in the hands of management and cannot replace management. Management accounting processes quantitative data and collaborates with qualitative data. Only qualitative and unquantified data cannot be easily processed by management accounting.

TOOLS AND TECHNIQUES OF MANAGEMENT ACCOUNTING

A number of tools and techniques are used to supply the information required by the management. Any one technique can not satisfy all managerial needs. The tools and techniques used in management accounting are as follows:

1. **Financial Policy and Accounting** – every concern has to take a decision about the sources of raising funds. The funds can be raised either through the issue of share capital or through the raising of loans. Capital or preference share capital. The second decision concerns the raising of the loans. Whether the loans should be long-term or short-term is again a matter of policy. The proportion between share capital and loans should also be decided.
2. **Analysis of Financial Statements-** The analysis of financial statement is meant to classify and present the data in such a way that it becomes useful for the management. The meaning and significance of the data is explained in it in non-technical language. The techniques of financial analysis include comparative financial statements, ratios, funds flow statement, trend analysis etc.
3. **Historical Cost Accounting-** The system of recording actual cost data on or after the date when it has been incurred is known as historical cost accounting. The actual cost is compared to the standard cost and it gives an idea about the performance of the concern.
4. **Budgetary Control-** It is a system which uses budgets as a tool for planning and control. The budgets of all functional departments are prepared in advance. The actual performance is recorded and compared with the pre-determined targets. The timing of budgets and finding out deviations is an important tool for planning and controlling.
5. **Standard Costing-** Standard costing is an important technique for cost control purposes. In standard costing system, costs are determined in advance. The actual costs are recorded and compared with standards costs. The variances, if any, are analysed and their reasons are ascertained.
6. **Marginal Costing-** This is a method of costing which is concerned with changes in costs resulting from changes in the volume of production. Under this system, cost of product is divided into marginal (variable) and fixed cost. The latter part of cost (fixed) is taken as fixed and is recorded over a level of production and every additional production unit involves only variable cost.
7. **Decision Accounting-** An important work of management is to take decisions. Decision taking involves a choice from various alternatives. There may be decisions about capital expenditure, whether to make or buy, what price to be charged, expansion or diversification, etc.
8. **Revaluation Accounting-** This is also known as Replacement Accounting. The preservation of capital in the business is the main objective of management. The profits are calculated in such a way that capital is preserved in real terms. During periods of rising prices, the value of capital is greatly affected.
9. **Control Accounting-** Control accounting is not a separate accounting system. Different systems



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have their control devices and these are used in control accounting. In control accounting we can use internal check, internal audit, statutory audit and other similar methods for control purposes.

- 10. Management Information Systems-** With the development of electronic devices for recording and classifying data, reporting to management has considerably improved. The data relevant planning, co-ordination and control is supplied to the management. Feedback of information and responsive can be used as control techniques.

Difference between Financial Accounting and Management Accounting

Basis of Difference	Financial Accounting	Management Accounting
1. Objective	Its objective is to record various transactions and to know, on that basis, profit or loss during a particular period and financial position at the end of that period.	Its objective is to provide necessary accounting information to the management which may help in taking decisions and formulating policies.
2. Subject-matter	It is concerned with assessing the results of business as a whole.	It is concerned with assessing the activities of different units, departments and cost centers i.e., it examines efficiency not only of the whole enterprise but of different departments also.
3. Historical/ Futuristic	It is mainly concerned with the historical data.	It focuses its attention on future and uses historical data only for taking decisions for the future.
4. Compulsion	Generally, financial accounting is compulsory.	Management accounting is used voluntarily and generally its procedure is also not determined by law
5. Reporting	It is used to find out profitability and financial position of the concern	The main idea for preparing reports in this accounting is to provide information as per requirements of the management.
6. Description	It records only those transactions or events which can be expresses in monetary terms.	It covers all such monetary and non-monetary events which influence managerial decisions.
7. Quickness of Communication	The communication of information in this accounting is very slow and time consuming.	There is relatively more emphasis on quick and prompt communication of information.
8. Accounting Principles	They are prepared generally on the basis of certain accepted accounting principles and conventions.	No set accounting principles are followed in this accounting
9. Period	Generally, its duration is one year and it is called as accounting year or financial year.	It collects and supplies information from time to time during the whole year.
10. Publication	As per Companies Act, every company is required to send a copy of its final accounts to the Registrar of Companies. Moreover, its publication is compulsory in case of Public Company.	They are prepared for the use of management only and thus they are not published.
11. Audit	These accounts can be audited	There is no such provision in this



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		accounting.
12. Scope	Its scope is limited	Its scope is much wider.



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Users of Financial Statements

The major job of the accounting system is to collect and provide information. It gathers, classifies, analyses, processes, interprets and communicates data about the economic activities of the firm in form of financial statements. Financial statements are needed by a variety of people. Some users of the financial statements have a direct interest in the firm, while others have an indirect interest. Those who are directly interested in the financial information are owners, managers, creditors, investors, employees, customers and tax authorities. The indirect users include financial analysts, trade associations, or trade unions.

The following are the important users of financial statements:

- a) **Owners** have the primary interest in the financial information. They have entrusted their financial resources to the firm and, therefore, would like to know periodically its performance. Managers are the custodians of their investments and, therefore, they must submit periodical financial reports to owners.
- b) **Managers** are responsible for the overall performance of the firm. They make several decisions and, therefore, need information. Financial statements provide relevant information in which managers have a direct interest.
- c) **Creditors** supply financial resources to the firm. They are interested in the continuing profitable performance of the firm so that they may regularly receive interest and repayment of the principal sum. They need financial statements to evaluate the firm's performance and to determine the degree of risk to which they are exposed.
- d) **Potential** investors, creditors or owners, get an idea about the firm's financial strength and performance from its financial reports. They are generally interested in the earnings, dividend and growth trends of the firm. Usually they take the services of financial analysis in evaluating the performance of the firm.
- e) **Employees** and trade unions also make use of the financial information revealed in the financial statements. They can bargain on matters relating to salary determination, bonus, fringe benefits, or working conditions on the basis of the accounting information. Thus, financial information is useful to employees and unions, as they get insight into matters affecting their economic and social interests.
- f) **Customers** might be interested in the financial information because a careful study of the financial statements may provide information about the prices being charged by the firm.
- g) **Government** also has an interest in the financial statement for regulatory purposes. The tax department of government has an interest in determining the taxable income of the firm.

Financial statements information to the various users. It may not be possible for accounting system to serve the needs of all users equally well. Sometimes the interests of users may conflict. In such situations, priority is given to the interests of owners and creditors. Financial statements present general purpose financial information that is designed to serve the common needs of owners, creditors, managers, and other users, with primary emphasis on the needs of present and potential owners and creditors.



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Unit II

Financial statement

Meaning: Generally financial statement may refer to any statement or document which discloses financial information relating to a business concern but technically financial statement include income statement or profit & loss account and balance sheet.

“The financial statements provide a summary of accounts of business enterprises, the balance sheet reflecting the assets, liabilities and capital as on a certain date and the income statement showing the result of operation during a certain period.

Types of financial statements: on the whole financial statements consist of the following:

1. Income statement or trading and profit & loss account which is preparing by a business concern in order to know financial results or earnings during a specified period.
2. Position statement or balance sheet which is prepared by a business concern on a particular date in order to know its financial position.
3. Other statements such as statement of retained earnings, fund flow statement, cash flow statement etc.

Objectives of financial statements : the objectives of financial statements in general are as follows:

1. Source of information
2. Information of earning
3. Information of financial position
4. Information of change in financial position
5. Help in financial forecasting
6. Information to meet users needs.

Limitations of financial statements –

- 1) **Lack of preciseness:** The information furnished by the financial statements are not precise.
- 2) **Based only on Financial Factors:** Financial statements don't disclose the correct financial position of the business concern.
- 3) **Static picture:** Balance sheet is considered to be a static document; and it reflects the position of the concern at a moment of time.
- 4) **Values shown are not real values:** Balance sheet is not a valuation statement. In other words, the values shown in it are not real values of assets or values for which these can be sold
- 5) **Estimated profit:** Profit disclosed by the profit and loss account is also not a real profit.

Objectives of analysis and interpretation of financial statements –

Though every user of financial statements has a distinct objective for which he attempts to analyze and interpret, some common but important objectives of this process are as follows:

- 1) **Earning capacity:** To determine and examine the current earning capacity and to estimate future prospects.
- 2) **Managerial efficiency:** To estimate overall as well as segment-wise performance efficiency and managerial ability in a business concern.
- 3) **Solvency:** To determine long-term as well as short-term solvency, which decides credit worthiness of the firm also.
- 4) **Forecasts and Budgets:** To forecast the future results and prepare the budgets.
- 5) **Inter-firm Comparison:** To make inter-firm comparison on the basis of operational efficiency and financial position of various firms engaged in the same industry.
- 6) **Financial Weakness:** To identify financial weaknesses of the firm and to suggest remedial measures.
- 7) **Growth Prospects:** To determine the growth prospects of different divisions as well as of the firm as a whole.



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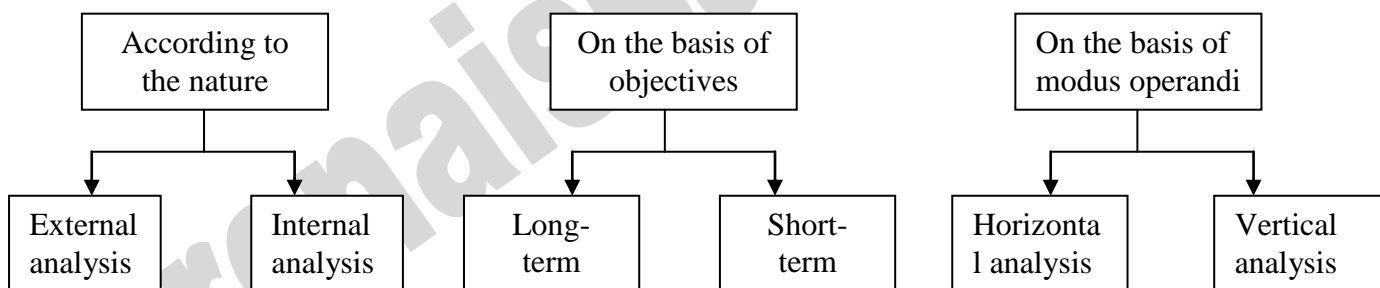
MEANING & CONCEPT OF FINANCIAL ANALYSIS

The term 'Financial Analysis' Which is also known as 'analysis and interpretation of financial statements refer to process of determining financial strength and weaknesses of the firm by stabilizing relationship between the items of balance sheet, profit & loss a/c and other operative data.

TYPES OF FINANCIAL ANALYSIS

There may be different types of financial statement analysis because it depends upon various factors, such as nature of the analyst, objective and modus operandi of analysis, etc. Some important types of financial statement analysis are as follows

TYPES OF FINANCIAL ANALYSIS



TOOLS OR METHODS OF FINANCIAL ANALYSIS

Following are the methods generally used for analysis and interpretation of financial statement.

1. Comparative financial statements
2. Common size statements
3. Trends analysis
4. Fund flow analysis
5. Cash flow analysis
6. Ratio analysis
7. Cost-volume-profit analysis

COMPARATIVE FINANCIAL STATEMENTS

The comparative financial statements are the statements of the financial position at different periods of time. The elements of financial position are shown in a comparative form to give an idea of the financial position of two or more periods. Generally two financial statements (balance sheet and income statements) are prepared in comparative form for the purpose of financial analysis. For example, when figure of sales of previous periods are given along with the figures of current period, the analyst will be able to see the trends of sales over different period of time.

THE COMPARATIVE STATEMENTS ARE-

1. Balance sheet
2. Income statement

COMPARATIVE BALANCE SHEET

Comparative balance sheet as on two different dates can be used for comparing assets and liabilities and finding out on increase or decrease in those items.

While interpreting comparative balance sheet, the interpreter is expected to consider the following points.

- a. **Current financial position-** For studying the current financial position, one should see the working capital for both the year. A study of increase or decrease in current assets and current liabilities enable to see the current financial position.



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- b. **Long term financial position-** The long term financial position of the concern can be analyzed by studying the changes in fixed assets, long term liabilities & capital. An increase in fixed assets should be compared to the increase in long term loans and capitals.
- c. **Profitability of the concern-** The study of increase or decrease in retained earnings will enable the interpreters to see whether the profitability has improved or not.

1) COMPARATIVE INCOME STATEMENT-

The income statement shows net profit or net loss on accounts of operations of a business. The comparative income statement gives an idea of the progress of a business over a period of time. The interpretation of income statements will involve

- a. The increase or decrease in sales should be compared with the increase or decrease of cost of goods sold.
- b. The second step is to study the operational profits.
- c. The effect of non-operating expenses such as interest, loans on profit should be studied.

2) COMMON SIZE STATEMENTS

Common size statements are those in which the figures are converted into percentage on some common basis. The use of these helps in making inter period & inter firm comparison and also in highlighting upon the trends in performance, efficiency & financial position. However any material change in the techniques procedure & principles would render these statements users & insignificant tool of financial analysis.

- a. **Common size balance sheet-** A statement in which balance sheet items are expressed as the assets and the ratio of each liability is expressed as a ratio of total liabilities is called common size balance sheet.
- b. **Common size income statements-** When the items of income statements are known as a percentage of sales to show the relationship of each item to sales it is known as the common size income statements.

3) TRENDS ANALYSIS

The financial statement may be analyzed by computing trends of several years

The methods of calculating trend percentage involve the calculation of percentage relationship that each item bears to the same item in the base year. It is very important from the point of view of forecasting or budgeting. It discloses the change in the financial and operating data between specific periods. However, no. of precautions should be taken, while using trends ratios as a tool.

4) RATIO ANALYSIS : Ratio analysis is a technique of analysis, comparison and interpretation of financial statements. It is a process through which various ratios are calculated and on that basis conclusions are drawn which become the base of managerial decisions.

5) FUND FLOW ANALYSIS

Financial statements can also be analyzed by preparing Funds Flow Statement and in that case it is known as funds Flow analysis. This statement is prepared in order to reveal the sources from which funds are obtained and the uses to which they are being put.

6) CASH FLOW ANALYSIS

The technique is very useful in the management of cash analysis of short-term liquidity. Under this method a statement is prepared to show the inflow and outflow of cash related to various activities in the concern during a specific period.

7) C.V.P. ANALYSIS : Cost volume profit analysis is an important tools in the process of managerial decisions and it is extremely helpful to management in variety of problems involving planning and control.



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Users of Financial Statements

The major job of the accounting system is to collect and provide information. Financial statements are needed by a variety of people. Some users of the financial statements have a direct interest in the firm, while others have an indirect interest. Those who are directly interested in the financial information are owners, managers, creditors, investors, employees, customers and tax authorities. The indirect users include financial analysts, trade associations, or trade unions.

The following are the important users of financial statements:

- h) **Owners** have the primary interest in the financial information. They have entrusted their financial resources to the firm and, therefore, would like to know periodically its performance. Managers are the custodians of their investments and, therefore, they must submit periodical financial reports to owners.
- i) **Managers** are responsible for the overall performance of the firm. They make several decisions and, therefore, need information. Financial statements provide relevant information in which managers have a direct interest.
- j) **Creditors** supply financial resources to the firm. They are interested in the continuing profitable performance of the firm so that they may regularly receive interest and repayment of the principal sum. They need financial statements to evaluate the firm's performance and to determine the degree of risk to which they are exposed.
- k) **Potential** investors, creditors or owners, get an idea about the firm's financial strength and performance from its financial reports. They are generally interested in the earnings, dividend and growth trends of the firm. Usually they take the services of financial analysis in evaluating the performance of the firm.
- l) **Employees** and trade unions also make use of the financial information revealed in the financial statements. They can bargain on matters relating to salary determination, bonus, fringe benefits, or working conditions on the basis of the accounting information. Thus, financial information is useful to employees and unions, as they get insight into matters affecting their economic and social interests.
- m) **Customers** might be interested in the financial information because a careful study of the financial statements may provide information about the prices being charged by the firm.
- n) **Government** also has an interest in the financial statement for regulatory purposes. The tax department of government has an interest in determining the taxable income of the firm.

Ratio analysis

Meaning of Ratio Analysis –

Ratio analysis is a technique of analysis, comparison and interpretation of financial statements. It is a process through which various ratios are calculated and on that basis conclusions are drawn which become the base of managerial decisions.

Advantages of Ratio Analysis –

- 1) Useful in simplifying accounting figures.
- 2) Useful in financial position analysis
- 3) Useful in assessing the operational efficiency
- 4) Helpful in financial forecasting and planning.
- 5) Useful in locating the weak spots of the business.



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- 6) Useful in comparative study
- 7) Helpful in communication and coordination.
- 8) Useful in control

Classification or types of ratios –

Accounting ratios may be classified in a number of ways keeping in view the purpose of study. However, for the sake of convenience and simplicity ratios may be classified as follows –

- i) Profitability ratios –
- ii) Turnover or activity ratios
- iii) Liquidity ratios
- iv) Long-term solvency ratios

Profitability ratios –

The primary objective of each business enterprise is to earn profits. In fact profit earning is considered essential not only for the survival of business but is also required for its expansion and diversification. Generally, profitability ratios are expressed in terms of percentage.

I) General Profitability Ratios –

This group consists of profitability ratios based on sales and the important ratios of general profitability are as follows-

- 1) Gross profit ratio – This ratio establishes relationship of gross profit to net sales of a firm.
- 2) Net profit ratio – This ratio establishes the relationship in term of percentage between 'NP' and 'Net sales'.
- 3) Operating ratio – This ratio establishes relationship between operating cost and net sales.
- 4) Expenses ratio – This ratios are calculated to ascertained the relationship that exists between operating expenses and volume of sales.

II) Overall Profitability Ratios – The overall profitability of a business can be measured in terms of profits related to investments made in the business. The main ratios measuring overall profitability are as follow:

- 1) Return on proprietor's funds or shareholder's investment – This ratio determines the earning capacity related to owners capital or investment.
- 2) Return on equity capital – Return on equity capital is very important from the view of equity share holders because dividend on equity shares depends upon the profit available for equity share holders.
- 3) Return on capital employed – It establishes the relationship between profits and capital employee.
 - a. Net capital employed
 - b. Proprietor's Net capital employed.

Turnover Ratios – These ratios are also called as 'Activity Ratios' or 'Performance Ratios'. The main objective of these ratios is to judge the work performance of the enterprise and effectiveness of managerial decisions. The greater ratio the more will be efficiency of asset usage. The lower ratio reflects the under utilization of the resources available at the disposal of the firm.

The following are important turnover or activity ratios –



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- 1) Stock turnover ratio – This ratio establishes relationship between the cost of goods sold during a given period and the average amount of inventory carried during that period.
- 2) Debtor's turnover ratio - This ratio establishes relationship between net credit sales and average debtors of the year and indicates the number of times on the average the receivables are turnover in each year.
- 3) Average collection period or debt collection period – Indicates the average period of collection due from debtors.
- 4) Creditor's turnover ratio – This ratio establishes relationship between net credit purchases and average creditors during a year.
- 5) Average payment period - Indicates the average period of payment due to creditors.
- 6) Working capital turnover ratio – It indicates the number of times the working capital is rotated in the course of a year.

Liquidity Ratios - Liquidity refers to the ability of a concern to meet its current obligations as and when they become due. Liquidity ratios measure the short-term solvency and for this purpose following ratios can be computed –

- 1) **Current ratio** – Current ratio is most widely used ratio to judge short term financial position of a firm.
- 2) **Liquid ratio** – This ratio tests the short-term liquidity of the firm in its strict meaning because it compares current liabilities with liquid or quick assets and not with current assets.
- 3) **Absolute liquid ratio** – Establishes relationship between absolute liquid assets and liquid liabilities.

Solvency Ratios –

Solvency means ability of a firm to pay its liabilities on due date. In broader sense the analysis of solvency can be divided into two groups –

- (A) Short-term solvency – It examines the ability of a concern to meet its current obligations as and when they become due and for this purpose liquidity ratios are used which have already been discussed in detail earlier in this chapter.
- (B) Long-term solvency – Such solvency is tested on the basis of the ability of a concern to pay its long-term liabilities at due time. The ratios to be used for this purpose are called as 'Ratios of Financial Position' or 'Stability Ratios'. The main ratios of this category are as follows –
 - a. Debt-Equity ratio – This ratio reflects the long-term financial position of a firm.
 - b. Proprietary ratio – This ratio indicates the relationship between proprietor's funds and total assets.
 - c. Solvency ratio – This ratio examines whether the total realizable amount from all assets of a firm is enough to repay all of its external liabilities or not.
 - d. Fixed assets ratio – According to sound financial policy the fixed assets should be acquired out of the long-term funds or liabilities only and on this basis fixed assets.
 - e. Capital gearing ratio – This ratio establishes the relationship between fixed cost bearing capital (Preference Shares + Debentures + Long-term Loan) and Equity Share Capital Fund (Equity Share Capital + Reserves & Surplus).
 - f. Interest coverage ratio or debt service ratio – This ratio indicates the ability of a concern to pay the interest due.



SUMMARY OF IMPORTANT FORMULAE		
Description	Formula	Form
General Profitability Ratios		
• Gross Profit Ratio	$= \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$	Percentage
• Net Profit Ratio	$= \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$	Percentage
• Net Operating Profit Ratio	$= \frac{\text{Net Operating Profit}}{\text{Net Sales}} \times 100$	Percentage
• Operating Ratio	$= \frac{\text{Cost of Goods sold} + \text{Operating Exp.}}{\text{Net Sales}} \times 100$	Percentage
• Specific Expense Ratio	$= \frac{\text{Specific Expense}}{\text{Net Sales}} \times 100$	Percentage
Over all Profitability Ratios		
• Return on Proprietor's Funds or Shareholder's Investment	$= \frac{\text{Net Profit (after interest \& tax)}}{\text{Shareholder's Funds}} \times 100$	Percentage
• Return on Equity Shareholder's Funds	$= \frac{\text{Net Profit after interest \& tax} - \text{Preference Dividend}}{\text{Equity Shareholder's Funds}} \times 100$	Percentage
• Return on Equity Capital	$= \frac{\text{Net Profit after Interest \& tax} - \text{Preference Dividend}}{\text{Paidup Equity Capital}} \times 100$	Percentage
• Return on Capital Employed		
(i) Gross Capital Employed	$= \frac{\text{Net Profit before interest \& tax}}{\text{Total Assets}} \times 100$	Percentage
(ii) Net Capital Employed	$= \frac{\text{Net Profit before interest \& tax}}{(\text{Net}) \text{ Capital Employed}} \times 100$	Percentage
<p><i>Note : (Net) Capital Employed = Total Assets - Current Liabilities Or Share Capital + Reserves & Surplus + Long-term Liabilities</i></p>		
• Earning per Share (EPS)	$= \frac{\text{Net Profit Available for Equity Shareholders}}{\text{No. of Equity Shares}}$	in Rs.



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(III) Turnover Ratios or Activity Ratios

• Stock Turnover or Inventory Turnover or Merchandise Turnover	$= \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$	Times
• Debtors Turnover or Receivables Turnover	$= \frac{\text{Net Credit Sales}}{\text{Average Debtors/Receivables}}$	Times
• Average Collection Period	$= \frac{\text{Average Debtors/Receivables}}{\text{Net Credit Sales}} \times 365 \text{ or } 12$	Days or months
• Creditors Turnover or Payables Turnover	$= \frac{\text{Net Credit Purchases}}{\text{Average Creditors/Payables}}$	Times
• Average Payment Period	$= \frac{\text{Average Creditors/Payable}}{\text{Net Credit Purchases}} \times 365 \text{ or } 12$	Days or months
• Working Capital Turnover	$= \frac{\text{Cost of Goods Sold (or Sales)}}{\text{Working Capital}}$	Times
• Total Assets Turnover	$= \frac{\text{Net Sales or Cost of Goods Sold}}{\text{Total Assets}}$	Times
• Fixed Assets Turnover	$= \frac{\text{Net Sales or Cost of Goods Sold}}{\text{Fixed Assets}}$	Times
• Current Assets Turnover	$= \frac{\text{Cost of Goods Sold (or Sales)}}{\text{Current Assets}}$	Times

(IV) Liquidity Ratios

• Current Ratio or Working Capital Ratio	$= \frac{\text{Current Assets}}{\text{Current Liabilities}} \text{ (Ideal Level 2 : 1)}$	Pure Ratio or Fraction
• Liquid or Quick or Acid Test Ratio	$= \frac{\text{Liquid Assets}}{\text{Current Liabilities}} \text{ (Ideal Level 1 : 1)}$	Pure Ratio or Fraction

Note : Some authors use Current Liabilities in place of Liquid Liabilities.

• Absolute Liquid Ratio	$= \frac{\text{Absolute Liquid Assets}}{\text{Liquid Liabilities}} \text{ (Ideal Level 0.5:1)}$	Pure Ratio or Fraction
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(V) Miscellaneous

• Net Profit to Paid-up Capital	$= \frac{\text{Net Profit}}{\text{Paid-up Capital}} \times 100$	Percentage
• Proprietor's Liabilities Ratio	$= \frac{\text{Proprietor's (Shareholders') Fund}}{\text{Outside Liabilities}}$	Pure Ratio
• Solvency Ratio	$= \frac{\text{Total Assets}}{\text{Total Outside Liabilities}}$	Pure Ratio
• Debt-equity Ratio	$= \frac{\text{Outsides Funds}}{\text{Shareholders' Fund}}$ or $\frac{\text{Long-term Debt}}{\text{Shareholders' Funds}}$	Pure Ratio



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Some Important Terminologies

1. Miscellaneous expenses.

Under this head we include fictitious assets which are as under-

- a) Preliminary expenses
- b) Underwriting Commission
- c) Discount on issue of shares and debentures
- d) Development expenditure
- e) Debit balance of P/L A/c (loss)

2. Current Assets

- a) Cash in hand
- b) Cash at bank
- c) Bills receivables
- d) Debtors
- e) Short term investments/Marketable securities/ Government securities
- f) Accrued income
- g) Prepaid expenses
- h) Stock or inventory

3. Liquid Assets

Assets Which can be easily converted into cash is known as liquid assets.

$$\text{Liquid Assets} = \text{Current Assets} - \text{Stock} - \text{Prepaid Expenses}$$

4. Absolute Liquid Assets

$$\text{Cash} + \text{Bank} + \text{Marketable Securities}$$

5. Current Liabilities

- a) Creditors
- b) Bills Payables
- c) Outstanding Expenses
- d) unearned income advance income
- e) Short term loans
- f) Bad debts reserves
- g) Provision for tax
- h) Bank overdraft
- i) Tax Payable
- j) Dividend Payable/Unclaimed dividend

6. Liquid liabilities

$$\text{Liquid liabilities} = \text{Current Liabilities} - \text{Bank overdraft}$$

7. Working Capital

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

8. Long term loans / liabilities / Long term Debts

- a) Debentures
- b) Mortgage loan
- c) Bank loan
- d) Unsecured loans
- e) Secured loans

9. Total debts/ total liabilities/ external liabilities

$$\text{Total debts} = \text{Current liabilities} + \text{long term liabilities}$$

10. Capital employed

$$\text{Net Capital Employed} = \text{Total real assets} - \text{Current Liabilities}$$

OR

$$\text{Share capital} + \text{Reserves and Surplus} + \text{Secured loans} + \text{Unsecured loans} - \text{misc. Expenditure}$$

11. Cost of goods sold

$$\text{COGS} = \text{Sales} - \text{Gross profit}$$

Or

$$\text{Opening stock} + \text{Purchases} + \text{Direct Expenses} - \text{Closing stock}$$



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12. Operating net profit

$$\begin{aligned} \text{Operating Net Profit} &= \text{Gross Profit} - \text{Operating expenses} \\ \text{Or} \\ \text{Net profit} + \text{non operating expenses} &- \text{non operating income} \end{aligned}$$

13. Average Stock

$$\text{Average Stock} = \frac{\text{Opening stock} + \text{Closing stock}}{2}$$

14. Receivables

$$\text{Receivables} = \text{Debtors} + \text{Bills receivables}$$

15. Payables

$$\text{Payables} = \text{Creditors} + \text{Bills payables}$$

16. Proprietors fund/ shareholders fund/ owners equity/ equity/ Net worth/ Net assets

$$\begin{aligned} &= \text{Total real assets} - \text{External liabilities} \\ \text{Or} \\ &\text{Share capital} + \text{Reserve \& Surplus} - \text{accumulated losses and fictitious assets} \end{aligned}$$



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Subject: Management and Accounting
CASH FLOW STATEMENT

It is based on statement depicting inflow and out flow of cash. The statement is designed to highlight upon the causes which bring changes in cash position between new balance sheet dates. It has same utility as that of fund flow statement but also bring to knowledge some other important points which are left in it also has certain limitations which must be taken in consideration when it issued.

Cash flow statement is a statement which describe the inflow (sources) and outflows (uses) of cash and cash equivalents in an enterprises during a specified period of time.

The statement exhibits the flow of incoming & outgoing cash.

CLASSIFICATION OF CASH FLOWS

For better interpretation, cash flow statement should report cash flows classified by operating, investing & financing activities.

1. **Cash flow from operating activities-** Operating activities are the principal revenue producing activities of the enterprise other than investing and financing activities.
2. **Cash flows from investing activities-** Those activities which are concerned with acquisition and disposal of long term assets and other investments are known as investing activities.
Examples of cash flows arising from investing activities are-
 - a. Cash payments to acquire fixed assets
 - b. Cash receipts from disposal of fixed assets.
 - c. Cash payments to acquire shares, warrants or debt instruments of other enterprises and interest in joint ventures.
3. **Cash flows from financing activities-** Financing activities are those which results in change in the size and composition of the owner's capital and borrowing of the enterprise. The important of it is that it is useful in predicting claims on further cash flows by providers of the funds to the enterprises.
Examples of cash flows arising from financing activities are-
 - a. Cash proceeds from issuing shares or other similar instruments
 - b. Cash proceeds from issuing debenture, loan, bonds & other short or long term borrowing

SIGNIFICANCE OF CASH FLOW

1. It shows the movement of cash
2. Helpful in efficient cash management
3. Disclose success or failure of cash planning
4. Information about internal financial statement
5. More useful than funds flow statement
6. Evaluation of liquidity
7. Analysis of each flow from different activities
8. Comparison of operational performance
9. Helpful in making future cash flow
10. Helpful in formulating the policies
11. Useful to outsiders.

LIMITATIONS

1. It cannot take the place of income statement.
2. The cash balance disclosed by cash flow statement may not represent the real liquid position of the business.
3. Cash flow statement is not suitable for judging the profitability of a firm.



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DIRECT METHOD

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Under this method cash receipts and cash payments related to operating activities are shown and the difference of these two results in cash flows from operating activities. The following format can be used for such calculation:

Calculation of Net Cash Flows from operating Activities (Direct-Method)

PARTICULARS	RS.	RS.
Cash Sales	
Cash received from Debtors/Customers	
Less: Cash Purchases	
Cash Paid to Creditors/Suppliers	
Cash Expenses (wages and salaries, rent, rates, etc.)	

Cash Generated from Operating Activities	
Less: Income-tax Paid	
Net Cash Flows from Operating Activities	

Note: It is clear from the above format that non-cash items (Depreciation, Goodwill written-off, Preliminary expenses written-off, etc.) and non-operating items (Profit or Loss on the sale of fixed assets and investments) are not required to be adjusted under Direct Method.

Cash Flow Statement
For the year ended
[As per Accounting Standard -3 Revised]

I. Cash Flow from Operating Activities Net Profit as per Profit and Loss A/c or Difference between Closing Balance and Opening Balance of Profit and Loss A/c Add: Transfer to reserve ; ➤ Proposed dividend for current year ➤ Interim dividend paid during the year ➤ Provision for tax made during the current year ➤ Extraordinary item, if any, debited to the Profit and Loss A/c Less: Extraordinary item, if any, credited to the Profit and Loss A/c Refund of tax credited to Profit and Loss A/c (A) Net Profit before Taxation and Extraordinary Items Adjustment for Non-cash and Non operating Items (B) Add: Items to be Added ➤ Depreciation ➤ Preliminary Expenses/Discount on Issue of Shares and Debentures written off ➤ Goodwill, Patents and Trade Marks Amortised		
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<ul style="list-style-type: none"> ➤ and Debentures ➤ Assets <p>(C) Less: Items to be Deducted</p> <ul style="list-style-type: none"> ➤ Interest Income ➤ Dividend Income ➤ Rental Income ➤ Profit on Sale of Fixed Assets <p>(D) Operating Profit before Working Capital Changes (A + B-C) -</p> <p>(E) Add: Decrease in Current Assets and Increase in Current Liabilities</p> <p>Detail:</p> <ul style="list-style-type: none"> ➤ Decrease in Stock/Inventories ➤ Decrease in Debtors/Bills Receivables ➤ Decrease in Accrued Incomes ➤ Decrease in Prepaid Expenses ➤ Increase in Creditors/Bills Payables ➤ Increase in Outstanding Expenses ➤ Increase in Advance Incomes ➤ Increase in Provision for Doubtful Debts <p>(F) Less: Increase in Current Assets and Decrease in Current Liabilities Detail:</p> <ul style="list-style-type: none"> ➤ Increase in Stock/Inventories. ➤ Increase in Debtors/Bills Receivables ➤ Increase in Accrued Incomes ➤ Increase in Prepaid Expenses ➤ Decrease in Creditors/Bills Payables ➤ Decrease in Outstanding Expenses ➤ Decrease in Advance Incomes ➤ Decrease in Provision for Doubtful Debts <p>(G) Cash Generated from Operations (D + E - F)</p> <p>(H) Less: Income Tax Paid (Net of Tax Refund received)</p> <p>(I) Cash Flow before Extraordinary Items: Extraordinary Items (+/-)</p> <p>(J) Net Cash from (or used in) Operating Activities</p>	
<p>II. Cash Flow from investing Activities</p> <ul style="list-style-type: none"> ➤ Proceeds from Sale of Fixed Assets ➤ Proceeds from Sale of Investments ➤ Proceeds from Sale of Intangible Assets ➤ Interest and Dividend received (For Non-financial Companies only) ➤ Rent Income ➤ Purchase of Fixed Assets ➤ Purchase of Investments ➤ Purchase of Intangible Assets like Goodwill ➤ Extraordinary Items (+/-) <p>Net Cash from (or used in) Investing Activities</p>	
<p>III. Cash Flow from Financing Activities</p> <ul style="list-style-type: none"> ➤ Proceeds from Issue of Shares and [Debentures] ➤ Proceeds from Other Long-term Borrowings 	



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<ul style="list-style-type: none">➤ Final Dividend Paid➤ Interim Dividend Paid➤ Interest on Debentures and Loans Paid➤ Repayment of Loans➤ Redemption of Debentures/Preference Shares➤ Extraordinary Items➤ Net Cash from (or used in) Financing Activities <p>IV. Net Increase/Decrease in Cash and Cash Equivalents (I + II + III)</p> <p>V. Add: Cash and Cash Equivalents in the beginning of the year</p> <ul style="list-style-type: none">➤ Cash in Hand➤ Cash at Bank (Less: Bank Overdraft)➤ Short-term Deposits➤ Marketable Securities <p>VI. Cash and Cash Equivalents at the end of the year</p> <ul style="list-style-type: none">➤ Cash in Hand➤ Cash at Bank (Less: Bank Overdraft)➤ Short-term Deposits➤ Marketable Securities ;	
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FUND FLOW STATEMENTS

The funds flow statement is a financial statement to depict the position of flow of funds during the period between two balance sheets.

“A statement of sources and application of funds is a technical device designed to analyse the changes in the financial condition of a business enterprise between two dates.”

Meaning of Fund –

The term ‘Fund’ is used to convey a variety of meanings in financial management. In a narrower sense it includes only cash or cash equivalents of the business, while in the broader sense it covers all financial resources of the enterprise. However, in the context of funds flow analysis the term ‘fund’ is used to describe ‘net working capital’ and net working capital refers to the excess of current assets over current liabilities. In brief:

Fund = Net Working Capital = Total Current Assets – Total Current Liabilities.

Meaning of Flow –

The term ‘flow’ means movement and in this sense it includes both ‘inflow’ and ‘outflow’. On this basis the term ‘fund flow’ means ‘Change in Funds’ or ‘Change in Working Capital’. If the effect of any transaction results in increase of working capital, it is called a source of funds and if it results in decrease of working capital, it is known as an application of fund.

Objective of fund flow statement : the main objective of this statement are as follows :

1. To find out the position of working capital on two dates of balance sheets.
2. To know the changes in working capital during this period.
3. To know the causes of changes in working capital.
4. To know the inflow of funds according to their sources.
5. To know the item-wise outflow of funds during this period.
6. To understand the main features of financial operation and policies.

Limitation of fund flow statement :

1. A fund flow statement is not a substitute of income statement or a balance sheet. It provides only some additional information relating to financial position.
2. It is basically historic in nature. Though projected fund flow statement may give an idea about the future but it cannot be prepared with much accuracy.



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3. Change in cash are more important for financial management than the working capital which are not reflected in this statement.
4. It is not original financial statement but simple re-arrangement of data given in balance sheet and profit and loss a/c.
5. It does not cover non-fund transactions such as issue of bonus share, issue of debentures for the purchase of machines etc.

TECHNIQUE OF PREPARING FUNDS FLOW STATEMENTS

1. Funds from operation
2. Schedule of change in working capital
3. Fund flow statement

Sources of Funds –

Funds from operations: It refers to increase in working capital resulting from operating activities of business. It can be computed by preparing Adjusted Profit & Loss A/c as shown below:

Adjusted Profit and Loss Account

	Rs.		Rs.
To Depreciation		By Balance b/d	
To Loss on Sale of Fixed Assets		(Balance of P&L A/c at the end of previous year)	
To Loss on sale of long-term investment		By Profit on Sale of fixed assets	
To Preliminary Expenses written off		By Profit on Long-term Investment	
To Goodwill written off		By Refund of Tax	
To Discount on Debentures written off		By Dividend on Investment	
To Provision for Taxation		By Funds from Operations	
To Dividend/Interim Dividend		(Balancing figure)	
To Proposed Dividend			
To Transfer to General Reserve			
To Transfer to Sinking Fund			
To Balance c/d			
(Balance of P&L A/c at the end of current year)			

Schedule of changes in working capital

Items	As on	As on	Change	
			Increase	Decrease
Current Assets:				
Cash balance				
Marketable securities				
Accounts receivable				
Stock-in trade				
Prepaid expenses				
Current Liabilities:				
Bank Overdraft				
Outstanding Expenses				
Account Payable				
Net Increase/Decrease in Working Capital				



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Funds Flow Statement

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FUNDS FLOW STATEMENT

Sources of Funds:
Issue of Shares
Issue of Debentures
Long-term borrowings	.....
Sales of fixes assets	.....
Operating profit*	.....
Total Sources	<u>.....</u>
Application of funds:	.....
Redemption of redeemable preference shares	.....
Redemption of debentures	.....
Payment of other long long-term loans	.....
Operating loss*	.....
Payment of dividends, tax, etc.	.....
Total Uses	<u>.....</u>

Net increase/decrease in working capital (Total Sources — Total Uses)

*Only one figure will be there

The funds flow Statement can also be prepared in "T" shape form as shown below:

FUNDS FLOW STATEMENTS

Particulars	Rs.	Particulars	Rs.
Sources of Funds:		Applications of Funds:	
Issue of shares	Redemption of redeemable preference shares	.....
Issue of debentures	Redemption of debentures	.....
Long-term borrowings	Payment of other long-term loans	.....
Sales of fixed assets	Purchase of fixed assets	.....
Operating profit*	Operating loss*	.....
Decrease in working capital*	Payment of dividends, tax, etc.
		Increase in working capital*

*Only one figure will be there.



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UNIT III

PROCESS COSTING

Definition:

Some important definitions of process costing are as under –

“Process cost accounts are applied to concerns which produce a commodity that has to go through several processes and which requires to know the cost of each process”.

- Charles.

“Process costing is used to ascertain the cost of each stage of manufacture where material is passed through various operations to obtain a final product to result, with by products in many cases at different stages.

- Lunt and Ripley

Application of process costing –

Process costing is employed in the following types of industries –

- 1) Food processes industries, e.g., flour mills, meat products, milk dairy, confectionaries, fruits and vegetables processing etc.
- 2) Other industries involving a sequence of processes, e.g., paper mills, cement works, coke works, canning factory, textile manufacture, cartoon making, etc.
- 3) Metallurgical industries, e.g., iron and steel, aluminum, wire drawing and netting and polishing, alloy production etc.
- 4) Chemical industries, e.g., drugs and pharmaceuticals, paints soap making, production of sugar, molasses and alcohol, breweries, distilleries, oil refining, etc.

Salient features/essential characteristics of process costing –

- 1) The cost per unit produced is the average cost which is calculated by dividing the total process cost by the number of units produced.
- 2) Some loss of materials in processes (due to chemical reaction, evaporation, etc.) is unavoidable.
- 3) The production is continuous and the final product is the result of a sequence of processes.
- 4) Processing of raw materials may give rise to the production of several products. These several products produced from the same raw material may be termed as joint products or by-products.
- 5) The products are standardized and homogeneous.
- 6) Costs are accumulated process-wise.
- 7) The sequence of operations or processes is specific and pre-determined.
- 8) The finished product of each but last process becomes the raw material for the next process in sequence and that of the last process is transferred to the finished goods stock.

Advantages / uses/ need of process costing –

Main uses of process costing are as follows –

- 1) System of standard costing can be applied with ease in case of process accounts.
- 2) Valuation of inventory of work-in-process of different processes and finished products is facilitated by process accounts.
- 3) Cost of individual processes as well as of finished products can be ascertained at short intervals.
- 4) Make or buy decisions for different processes can be taken in the light of costs at different processes. For example, in case of textile manufacture if the cost at weaving process is higher than the price at which plain cloth can be purchased from outside, the company may decide to buy plain cloth from outside and perform the process of printing only. If weaving costs are lower, the weaving process is also performed.
- 5) Effectiveness at each process is determined on the basis of costs incurred at individual process.
- 6) Since output at each process is homogeneous, average cost per unit can be easily calculated.



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- 7) Separate cost ascertainment for each process has motivational impact. Employees at the process resulting in cost economies can be rewarded, and those not performing up to the mark can be reprimanded.
- 8) Cost control is facilitated as it is ascertained as to where excessive cost has been incurred and where wastages and scraps are high.

Limitations of process costing –

Major limitations of process costing are –

- 1) Process costs throw light on efficiency level of entire group of people working at a process, not on the efficiency of individuals.
- 2) Determination of cost at processes is by itself not sufficient for cost control, make or buy decisions or for motivational measures.
- 3) In case production at a process is not homogeneous as in the case of foundries making casting of different sizes, shapes and of different qualities involving different alloys, the average per unit cost based on total output and total cost at a process will be misleading.
- 4) Process costs are historical costs and suffer from all weaknesses of such costs.
- 5) Valuation of inventories where there is work-in-progress at processes, involves lot of estimation.
- 6) Determination of cost of by-products and joint-products is also a mere estimation.

Principles of process costing –

The following principles should be followed for ascertaining costs at processes –

- 1) Output of one process is transferred to the next process and that of final process is transferred to finished goods account.
- 2) Cost per unit at processes is ascertained at the end of each specified period, e.g., on monthly or quarterly basis.
- 3) All normal losses should be charged to the output at the processes. However, cost per unit must never be influenced by abnormal gains and losses.
- 4) Each process is taken as a cost centre, i.e., all direct and indirect costs are assigned to processes on appropriate basis.
- 5) In case of by-products and joint-products, their share in joint costs should be carefully estimated and credited to the main process.
- 6) In case there are incomplete units at the process at the beginning and at the end of the period, equivalence of incomplete units is determined.

Normal and Abnormal losses:

Normal Process Loss: That amount of loss which cannot be avoided because of the nature of material or process is normal process loss. Such a loss is quite expected under normal conditions. It is caused by factor like chemical change, evaporation withdrawals for tests or sampling, unavoidable spoiled quantities etc.

Abnormal Process Loss: This type of loss consists of loss due to carelessness, machine break down, accident, use of defective material etc. Thus in cases due to abnormal factors it represents a loss which is over and above the normal loss.

Accounting Treatment of normal loss:

It is a fundamental costing principle that the cost of normal losses should be borne by the good production. Normal loss is generally determined as a percentage of input. Sometimes such a loss is due to cost of weight, say due to evaporation a chemical action. Since such a wastage is not physically present, obviously it cannot have any value.

However when normal loss is physically present in the form of scrap it may have some value, i.e. it may be sold at some price. Whenever scrapped material has any value, it is credited to the process account. This illustrated below.

Accounting Treatment of Abnormal Process Loss



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It is been stated earlier that abnormal loss is due to carelessness, accidents, machine, breakdown and other abnormal reasons. Unlike normal loss, abnormal loss is not absorbed by good production, rather it is transferred to costing P & L a/c. This is because if the cost of abnormal loss were to fall upon the good production the cost there will fluctuate and the information provided would be misleading. In order to overcome this and also to disclose the cost of abnormal loss, the following procedure may be adopted :

- (a) Allow for normal loss in the manner described earlier.
- (b) After considering normal loss, find out the cost per unit that process. This is done by the following formula process.

$$\text{Cost per unit} = \frac{\text{Total cost} - \text{value of normal loss}}{\text{Units introduced} - \text{normal loss units}}$$

- (c) Multiply the cost per unit (calculated as above) by the number of units of abnormal loss. This gives the total value of abnormal loss.
 - (d) Credit the relevant process account with the quantity and value of abnormal loss.
 - (e) The balance figure in the process account is the cost of good units produced in the process. This can also be found by multiplying cost per unit with the number of good units produced.
 - (f) Open Abnormal loss account and debit it with the quantity and value of abnormal loss shown in the process account sale proceed from abnormal loss are credited to abnormal loss account. Any balance left in this account is net loss and transferred costing P & L a/c.
- Fifty units are introduced into a process at a cost of rupee one each. The total additional expenditure incurred by the process is Rs. 30 of the units introduced 10% are normally spoiled in the spoiled in the course of manufactures these possess a scrap value of Rs. 0.25 each. Owing to an accident, only 40 units are produced. You are required to propose (i) Process a/c and (ii) abnormal loss a/c.

Abnormal Gain or Effectiveness -

The normal process loss represents the loss that would be expected under normal conditions. It is an estimated figure. The actual loss may be greater or less than the normal loss. If the actual loss is greater than normal loss, it is known as abnormal loss. But if actual loss is less than normal loss, a gain is obtained which is termed as abnormal gain or effectiveness. The value of abnormal gain is calculated in a manner similar to abnormal loss. It is shown on the debit side of the Process Account and credit side of the Abnormal Gain Account. Like abnormal loss, it is ultimately transferred to Costing Profit and Loss Account.

Joint and By Products

Joint products: The term joint products are used for two or more products of almost equal economic value which are simultaneously produced from the same manufacturing process and the same raw material. Joint products thus represent two or more products separated in the course of processing each product being in such proportion as the main product.

Characteristics:

- (a) Joint products are produced from the same raw material by natural proportion.
- (b) They are produced simultaneously by a common process.
- (c) They are comparatively of almost equal value.
- (d) Joint products may be saleable after separations or may be further processed by incurring additional costs to make them stable or an improved product.

A classic example of joint products as given above is found in oil refining, where items like petrol diesel, naphtha, kerosene etc. are produced from the crude oil. Other example are in flour mill where joint products are hides, canned meat, fertilizers etc. The joint product is also used to describe various qualities of the same product, as for example many grades of coal which may be produced in coal mining.

Examples of Joint Products



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Industry	Joint Products
1. Oil Refining	Petrol, Diesel, Kerosene, grease, lubricating oils.
2. Dairy	Skimmed Milk, butter
3. Meat processing	Meat, Hides
4. Mining	Several metals from the same or example copper, silver, zinc etc.

By Product:

By products are products of relatively small value which are incidentally and unavoidably produced in the course of manufacturing the main product. For example in sugar mills the main product is sugar. But bagasses and molasses of comparatively smaller value are incidentally produced and thus are by products, other examples of by products are oil cake produced in the extraction of edible oil, cotton seed produced in the cotton textile industry etc. These by products are unavoidably produced and are of secondary value. The sales value of these by products is much less as compared to the main product. For example sales value of byproducts bagasse and molasses is much less than that of the main product sugar.

By Products may be :

- Those sold in their original form without further processing.
- Those which require further processing

Distinctions between Joint Products and By Products.

A product may be treated as a joint product in one business & the same product may be treated as byproduct in another business. However the following factors should be considered to determine if a product is a joint product or a byproduct.

- Relative sales value:** If the sales value of all the products are more or less equal they are all treated as joint products. If however there are wide differences in the relative sales values of products, the product with the greater sales value is treated as the main product & the products of lower value are treated as by products.
- Objective of manufacture :** If the objective of manufacturing is product A, then unwanted products B & C are treated as by products.
- Policy of Management :** The management may decide to treat a particular product as the main product & the other product as by products. Alternatively it may choose to treat all products as joint products.

Examples of By Products:

Industry	Joint Products
1. Sugar	Bagasse, Molasses
2. Butter, textile	Cotton seed
3. Edible oil	Oil cake
4. Meat	Bones
5. Rice mills	Husk.

Distinction between Joint Product and By Product –

The point of distinction of Joint products and by products is a question of commercial importance, business objectives, profit pattern, certainty of market, necessity of further process etc.

The important features distinguishing Joint Products and by products are –

- Joint products are the products of equal economic importance, while by products are of lesser economic importance.
- Joint products are produced from same input and process whereas by products are produced from wastage, scrap and discarded material of the main process.
- Joint products are not produced incidentally but by products emerge incidentally also.



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- 4) Joint products have significant impact on total cost at the point of separation, whereas by products have little impact on total cost.
- 5) Joint products require further processing, while the byproduct generally do not require to be processed any further.

Joint Expenses –

There are certain industries where products are simultaneously produced and the same are referred to joint products. Expenses incurred are also joint in this case.

Joint in this case means that the products from the same basic raw material. Examples may include oil industry, gasoline, fuel oil, lubricants, crude oil etc.

The aim of analyzing joint expenses is to –

- i) Correct collection, compilation and classification of process cost.
- ii) Determine profit or loss on each line of manufacture.
- iii) Determine the pattern of production and the most profitable product mix.
- iv) Study the effect on cost and profits due to increase or decrease in production of joint products in order to fix prices.
- v) Determine the profitability of selling joint products and by-products as they come out at the split off point and maximize profit through marginal contribution analysis.

When accounting for joint products, the products are not identifiable as different individual products until a certain stage of production known as the split off point. All costs incurred before the split off point are called joint products costs. Joint costs should be shared properly otherwise valuation will be difficult.

Average Unit Cost Method –

In this method, the total costs are assessed, yielding an average unit cost with one net profit for the total operation. It is applicable where processes are common and inseparable for joint products and where the resultant products can be expressed in some common unit.

Physical Unit Method –

A physical base such as raw material weight, linear measure volume etc. is applied in apportioning pre-separation point costs to joint products. For example, if there is 40% beef in product X and 60% beef in product Y, 2/10 of the cost upto separation point will be charged to X and 6/10 to Y. It is not a good method in areas for instance one product is a gas and another is liquid.

Survey Method –

In this method all the important factors e.g. volume, selling price, technical side, marketing process etc. affecting costing are ascertained by means of extensive survey. Point values or percentage are given to individual products according to their relative importance and costs are apportioned on the basis of total points. These ratios should be revised from time to time depending on the factors affecting production and sales.

Contribution (Gross Margin) Method –

In this method the marginal cost of the joint cost is apportioned on the basis of weight or quantity of each product and fixed cost on the basis of marginal contribution made by each of the products. The method provides useful information for taking decision on maximization of profits by rearrangement of products and sales mix.

Market Value Method –

This is the most popular method of apportioning expenses that are joint. The joint costs are split into the ratio of selling price of each individual products and the costs are based on these ratios.

Oil Crushing, Refining and Finishing Process –

- 1. Crushing process
- 2. Refining process



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3. Finishing process

Crushing Process –

In this process raw material i.e. oil seeds or coconut or copra or kernels etc. are used. Other expenses of the process are debited, sale of bags or sacks is credited. Oil cakes or oil residue are sold as a by-product is also credited. The output is crude oil transferred as input in the next process. There are may be loss in weight in the process.

Refining Process –

Crude oil from crushing process is debited, other materials, wages and overheads of the process are debited. Loss weight if any, is credited. The output is refined oil. Fats and residual oil may be obtained as by products which are credited. The output being refined oil is transferred to the next process i.e. finishing process.

Finishing Process –

Refined oil obtained from refining process is debited. Other materials, wages and overheads of the process are debited. Sale of by product and loss in weight are credited. Sundry sales of finished oil are also credited. The balance of this process is credited as cost of production of refined oil. Cost of drums or barrels or tins for storage of refined oil is also debited to find out cost of stored finished oil.

If sale of finished oil is given in the question, then finished Stock A/c should be opened after finishing process A/c and in such a case cost of goods transferred from Finishing Process A/c, Cost of Packing material and sale of Finished oil are shown in Finished Stock A/c and the profit or loss is transferred to Profit & Loss A/c.

Inter-Process Profit –

Generally, the output of one process is transferred to another on cost basis. Similarly, goods manufactured in the final process are also transferred at cost to Finished Stock A/c. But sometimes it is desirable by a manufacturing concern to value goods processed by each process at a price corresponding to the market price of comparable goods. Thus profit or loss made by each process is revealed and the efficiency of a process is not affected by the efficiency or inefficiency of a previous process. The market price of the goods processed being generally higher than the cost of the process, each process account will show some profit. This profit is termed as inter-process profit.

Advantages of Inter Process Profit –

1. **Introducing of Working Efficiency of Process** – In this case, a process is doing well maintaining profits or loss is utilized by this method. It knows that process is working at loss and to remove default of this process and default gets by attempts of remove difficulties of that process, finished stock is treated as cheaper rate from markets and finished production of that process.
2. **Compare to other Process** – Transfer of cost including profits and compare to different process, cost is deficit by trying cost less product by that working efficiency increased.
3. **Confidential of Real Profits** – Cost transfer with profit to next process. Profits are confident in every cost plus profit in process.
4. **Decision to do Work by Self** – Trader may acknowledge of any cost of production of process transfer to contractor which production will be effected in surplus or deficit.

Limitations of Inter Process Profit –

1. **Imaging Profit** – We cannot tell real profits to inter process profits, this is only imaginary profits. Its main reason that is not sale in fact to transfer of goods in inter process.
2. **Difficulty in Calculation of Real Profit** – In this method, unrealized profits is calculated for the calculation of real profits become its calculation is very difficult.
3. **Unrealised Profit** – Opening stock and closing stock is taking to all the method, unrealized profit is included in that process in which book profits and real profits is not a acknowledge.



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Computation of Inter-Process Profit –

Under this method, the output of first process after charging certain profit is transferred to second process and the output of second process after charging certain profit is again transferred to third process. But in every process there remains certain stock which includes the part of profit of previous process. Thus profit included in the stock by previous process, is known as unrealized profit. Therefore, at the end of year the amount of profit included in the closing stock should be computed and the provision for unrealized profit should be made from the amount of total profit.

It is essential for calculation of unrealized profit for reserve –

1. In this first method, closing stock is not make of reserve of unrealized profit.
2. Calculation of profit of transfer of goods by an cost of $\frac{1}{4}$ or 20/80 or 25%.
3. Calculation of reserve of unrealized profit by method for closing stock difference of its called unrealized profit –

Unrealised profit = Value of closing stock – Cost of closing stock

OR

Cost of closing stock = $\frac{\text{Stock} \times \text{Cost Amount}}{\text{Total Amount}}$

STANDARD COSTING

MEANING OF STANDARD COST AND STANDARD COSTING:

The word 'standard' means a benchmark or gauge. The 'standard cost' is a predetermined cost which determines in advance what each product or service should cost under given circumstances. Backer and Jacobsen define "Standard cost is the amount the firm thinks a product or the operation of a process for a period of time should cost, based upon certain assumed conditions of efficiency, economic conditions and other factors". Chartered Institute of Management Accountants, London defines standard cost as "a predetermined cost which is calculated from management's standards of efficient operation and the relevant necessary expenditure". They are the predetermined costs based on technical estimate of material, labour and overhead for a selected period of time and for a prescribed set of working conditions.

The technique of using standard costs for the purposes of cost control is known as standard costing. Brown and Howard define "standard costing is a technique of cost accounting which compares the standard cost of each product or service with actual cost to determine the efficiency of the operation so that any remedial action may be taken immediately". The terminology of Cost Accountancy defines standard costing as "the preparation and use of standard costs, their comparison with actual costs, and the analysis of variance to their causes, and points of incidence". The London Institute of Cost and Works Accountants define it as "An estimate cost, prepared in advance of production or supply correlating a technical specification of material and labour to the price and wage rates estimated for a selected period of time, with an addition of the apportionment of overheads expenses estimated for the same period within a prescribed set of working conditions". Further, it is a system of cost accounting, which is designed to find out how much should be the cost of a product under the existing conditions. The actual cost can be ascertained only when production is undertaken. The predetermined cost is compared to the actual cost and a variance between the two enables the management to take necessary corrective measures.

STEPS INVOLVED IN STANDARD COSTING:

The technique of standard costing involves the determination of cost before occurring.

The standard cost is based on technical information after considering the impact of current conditions. With the change in condition, the cost also can be modified so as to make it more realistic. The standard cost is divided into standards for materials, labour and overheads. The actual cost is



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recorded when incurred. The standard cost is compared to the actual cost. The difference between the two costs is known as variance. The variances are calculated element wise. The management can take corrective measures to set the things right on the basis of different variances.

The basic purpose of standard costing is to determine efficiency or inefficiency in manufacturing a particular product. This will be possible only if both standard costs and actual costs are given side by side. Though standard costing system will be useful for all types of commercial and industrial undertakings but it will be more useful in those undertakings where production is standardized. It will be of less use in job costing system because every job has different specifications and it will be difficult to determine standard costs for every job.

STANDARD COSTING Vs. BUDGETARY CONTROL:

In budgetary control, budgets are used as a means of planning and control. The targets of various segments are set in advance and actual performance is compared with predetermined objects. In this way management can assess the performance of different departments. On the other hand, standard costing also set standards and enables to determine efficiency on the basis of standards and actual performance.

Budgetary control is essential to determine standard costs, whereas, the standard costing system is necessary for planning budgets. In budgetary control the budgets are prepared for the concern as a whole whereas in standard costing the standards are set for producing a product or for providing a service. In standard costing, unit concept is used while in budgetary control total concept is used. The budgets are fixed on the basis of past records and future expectations. Standard costs are fixed on the basis of technical information. Standard costs are planned costs and these are expected in future. As far as scope is concerned, in case of budgetary control it is much wider than standard costing. Budgets are prepared for incomes, expenditures and other functions of the departments such as purchase, sale, production, finance and personnel department. In contrary, standards are set up for expenditures only and, therefore, for manufacturing departments standards are set for different elements of cost i.e., material, labour and overheads.

Further, in budgetary control, the targets of expenditure are set and these targets cannot be exceeded. In this system the emphasis is on keeping the expenditures within the budgeted figures. In standard costing the standards are set and an attempt is made to achieve these standards. The emphasis is on achieving the standards. Actual costs may be more than the standard costs and there can be no such thing in budgetary control. The budgetary control system can be applied partly or wholly. Budgets may be prepared for some departments and may not be prepared for all the departments. If a concern is interested in preparing production budget only, it is free to do so. Standard costing cannot be used partially; it will have to be used wholly. The standards will have to be set for all elements of cost. In fact, the systems operate in two different fields and both are complimentary in nature.

STANDARD COSTS AND ESTIMATED COSTS:

The standard costs and estimated costs both are used to determine price in advance. The purpose of both of them is to control cost. They follow the same accounting principles. Despite similarities, they differ in terms of objects and purpose. Estimated costs are based on historical accounting. It is an estimate of what the cost will be. It is a cost of guesswork or reasonable estimate for the costs in future. On the other hand standard costs are based on scientific analysis and engineering studies. Standard costing determines what the cost should be. Standard costs are used as a device for measuring efficiency. The standards are predetermined and a comparison of standards with actual costs enables to determine the efficiency of the concern. Estimated costs cannot be used to determine efficiency. It only determines the expected costs. An effort is made that estimated cost should almost be near to actual costs. The purpose of determining estimated costs is to find out selling price in advance to take a decision whether to produce or to make and also to prepare financial budgets. Estimated costs do not serve the purpose of cost control. On the other hand standard costs are helpful in cost control. The analysis of variance enables to take corrective measures, if necessary. Standard costs are not easily



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changed. The standards are set in such a way that small changes in conditions do not require a change in standards. Estimated costs are revised with the change in conditions. They are made more realistic by incorporating changes in prices. Standard costs are more static than estimated costs. Estimated costs are used by the concern using historical costing. Standard costing is used by those concerns which use standard costing system. Standard costing is a part of cost accounting process while estimated costs are statistical in nature and as such they may not become a part of accounting.

ADVANTAGES OF STANDARD COSTING:

Standard costing is not only helpful for cost control purposes but it is also useful in production planning and policy formulation. It derives following advantages:

1. Measurement of Efficiency: It is a tool for assessing the efficiency after comparing the actual costs with standard costs to enable the management to evaluate performance of various cost centres. By comparing actual costs with standard costs variances are determined and management is able to identify the place of inefficiencies. It can fix responsibility for deviation in performance. A regular check on various expenditures is also ensured by standard costing system. The standards are being constantly analyzed and an effort is made to improve efficiency. Whenever a variance occurs the reasons are studied and immediate corrective measures are undertaken.

2. Production and Price Policy Formulation: It becomes easy to formulate production plans by taking into account standard costs. It is also supportive for finding prices of various products. In case, tenders are to be submitted or prices are to be quoted in advance then standard costing produces necessary data for price fixation.

3. Reduction of Work: In this system, management is supplied with useful information and necessary information is recorded and redundant data are avoided. The report presentation is simplified and only required information is presented in such a form that management is able to interpret the information easily and usefully. Therefore, standard costing reduces clerical work to a considerable extent.

4. Management by Exception: Management by exception means that everybody is given a target to be achieved and management need not supervise each and everything. The responsibilities are fixed and everybody tries to achieve his targets. If the things are going as per targets then the management needs not to bother. Management devotes its time to other important things. So, management by exception is possible only when targets of work can be fixed. Standard costing enables the determination of targets.

LIMITATIONS OF STANDARD COSTING:

Besides all the above benefits derived from this system, it has a number of limitations, which are discussed as follows:

1. Standard costing cannot be used in those concerns where non-standard products are produced.
2. The time and motion study is required to be undertaken for the process of setting up standards. These studies require a lot of time and money. Further, the process of setting up standards is a difficult task, as it requires technical skill.
3. There are no inset circumstances to be considered for fixing standards. With the change in circumstances the standards are also to be revised. The revision of standard is a costly process.
4. This system is expensive and small concerns may not afford to bear the cost. For small concerns the utility from this system may be less than the cost involved in it.
5. The fixing of responsibility is not an easy task. The variances are to be classified into controllable and uncontrollable variances. The responsibility can be fixed only for controllable variances not in the case of uncontrollable.
6. The industries liable for frequent technological changes will not be suitable for standard costing system. The change in production process will require a revision of standard. A frequent revision of standard will be costly. So this system will not be useful for industries where methods and techniques of production are fast changing.



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PRELIMINARIES FOR ESTABLISHING STANDARD COSTING SYSTEM:

The establishment of a standard costing system involves the following steps:

1. Determination of Cost Centre: A cost centre may be a department or part of a department or item of equipment or machinery or a person or a group of persons in respect of which costs are accumulated and one where control can be exercised. Cost centres are necessary for determining the costs.

2. Classification of Accounts: Classification of accounts is necessary to meet a required purpose i.e., function, asset or revenue item. Codes can be used to have a speedy collection of accounts. A standard is a predetermined measure of material, labour and overheads. It may be expressed in quantity and its monetary measurements in standard costs.

3. Types of Standards: The standards are classified into three categories:

(i) Current Standard: A current standard is a standard which is established for use over a short period of time and is related to current condition. It reflects the performance which should be accomplished during the current period. The period for current standard is normally one year. It is supposed that the conditions of production will remain unchanged. In case there is any change in price or manufacturing condition, the standards are also revised. Current standard may be ideal standard and expected standard.

(a) Ideal Standard: The standard represents a high level of efficiency. It is fixed on the assumption that favourable conditions will prevail and management will be at its best. The price paid for materials will be lowest and wastages cost of labour and overhead expenses will be minimum possible.

(b) Expected Standard: This standard is based on expected conditions. It is the target which can be achieved if expected conditions prevail. All existing facilities and expected changes are taken into consideration while fixing these standards. An allowance is given for human error and normal deficiencies. It is realistic and an attainable and it is used for fixing efficiency standard.

(ii) Basic Standard: A basic standard is established for use for an indefinite period or a long period. These standards are revised only on the changes in specification of material and technology production.

(iii) Normal Standard: Normal standard is a standard which is anticipated can be attained over a future period of time, preferably long enough to cover one trade cycle. This standard is based on the conditions which will cover a future period, say 5 years, concerning one trade cycle. If a normal cycle of ups and downs in sales and production is 10 years then standard will be set on average sales and production which will cover all the years.

4. Organisation for Standard Costing: In a business concern a standard costing committee is formed for the purpose of setting standards. The committee includes production manager, purchase manager, sales manager, personnel manager, chief engineer and cost accountant. The Cost Accountant acts as a coordinator of this committee. He supplies all information for determining the standard and later on coordinates the costs of different departments. He also informs the committee about the change in price level, etc. The committee may revise the standards in the light of the changed circumstances.

5. Setting of Standards: The standard for direct material, direct labour and overhead expenses are fixed. The standards for direct material, direct labour and overheads should be set up in a systematic way so that they can be used as a tool for cost control easily.

ANALYSIS OF VARIANCES:

The divergence between standard costs, profits or sales and actual costs, profits or sales respectively will be known as variances. The variances may be favourable and unfavourable. If actual cost is less than the standard cost and actual profit and sales are more than the standard profits and sales, the variances will be favourable. On the contrary if actual cost is more than the standard cost and actual profit and sales are less than the standard profits and sales, the variances will be unfavourable. The variances are related to efficiency. If variances are favourable, it will show efficiency and if variances are unfavourable it will show inefficiency. The variances may be classified into four categories such as Direct Materials Variances, Direct Labour Variances, Overheads Cost Variances and Sales or Profit Variances.

DIRECT MATERIAL VARIANCES:



renaissance

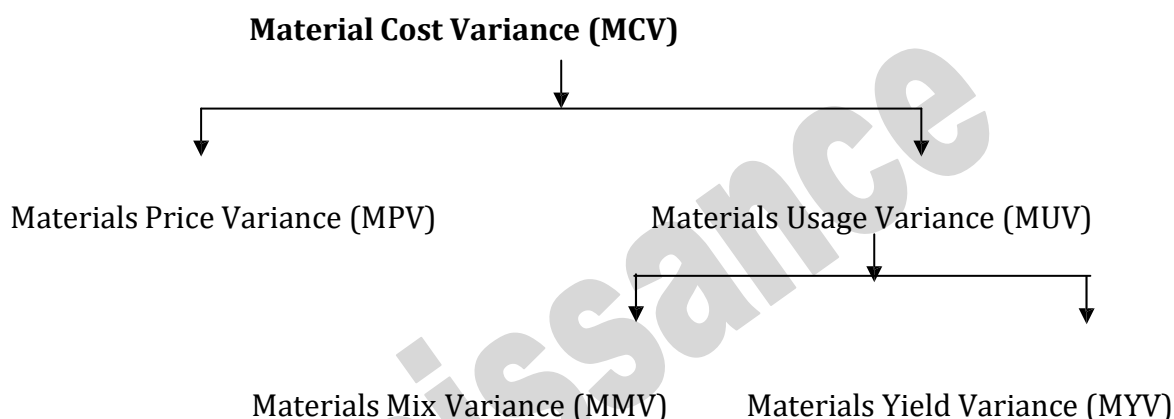
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Direct material variances are also known as material cost variances. The material cost variance is the difference between the standard cost of materials that should have been incurred for manufacturing the actual output and the cost of materials that has been actually incurred. Material Cost Variance comprises of: (i) Material Price Variance and (ii) Material Usage Variance: Material usage variance may further be subdivided into material Mix Variance and Material Yield Variance.

The Chart depicts the divisions and subdivisions of material variances.



The following equations may be used for verification of material cost variances.

(i) $MCV = MPV + MUV$ or $MPV + MMV + MYV$

(ii) $MUV = MMV + MYV$

(a) Materials Cost Variance: Material cost variance is the difference between standard materials cost and actual materials cost. Material cost variance arises due to change in price of materials and variations in use of quantity of materials. Material cost variance is ascertained as such:

Materials Cost Variance = Standard Material Cost – Actual Material Cost

Standard Material Cost = Standard Price per unit x Standard Quantity of materials

Actual Material Cost = Actual price per unit x Actual quantity of materials.

If the standard cost is more than the actual cost, the variance will be favourable and on the other hand, if the actual cost is more than the standard cost, the variance will be unfavourable or adverse.

(b) Materials Price Variance: Materials price variance arises due to the standard price specified and actual price paid. It may also arise due to: (i) Changes in basic prices of materials, (ii) failure to purchase the quantities anticipated at the time when standards were set, (iii) failure to secure discount on purchases, (iv) failure to make bulk purchases and incurring more on freight, etc., (v) failure to purchase materials at proper time, and (vi) Not taking cash discount when setting standards.

Materials Price Variance = Actual Quantity (Standard price – Actual price)

In this case actual quantity of materials used is taken. The price of materials is taken per unit. If the answer is in plus, the variance will be favourable and it will be unfavourable if the result is in negative.

(c) Material Usage Variance: Material usage (or quantity) variance arises due to the difference in standard quantity specified and actual quantity of materials used. This variance may also arise due to: (i) Negligence in use of materials, (ii) More wastage of materials by untrained workers or defective methods of production, (iii) Loss due to pilferage, (iv) Use of material mix other than the standard mix, (v) More or less yield from materials than the standard set, and (vi) Defective production necessitating the use of additional materials.

Materials usage variance = Standard Price (Standard Quantity – Actual Quantity)

The quantities of material specified and actually used are taken and standard price per unit is used. If the answer from the above mentioned formula is in plus, the variance will be a favourable variance but if the answer is in minus the variance will be unfavourable or adverse.

(d) Material Mix Variance: Materials mix variance is that part of material usage variance which arises due to changes in standard and actual composition of mix. Materials mix variance is the difference between standard price of standard mix and standard price of actual mix. The standard price is used in calculating this variance. The variance is calculated under two situations: (i) When actual weight of mix is equal to standard weight of mix, and (ii) When actual weight of mix is different from the standard mix.

(i) When Actual Weight and Standard Weight of Mix is Equal:



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In this case the formula for calculating mix variance is:

Standard cost of standard mix – Standard cost of actual mix.

(Standard Price x Standard Quantity) – (Standard Price x Actual Quantity) Or Standard unit cost (Standard Quantity – Actual Quantity)

In case standard quantity is revised due to shortage of one material, the formula will be equal to Standard unit cost (Revised Standard Quantity – Actual Quantity).

(ii) When Actual Weight and Standard Weight of Mix are Different:

When quantities of actual material mix and standard material mix are different, the formula will be:

$$\frac{\text{Total weight of Actual Mix}}{\text{Total weight of Standard Mix}} \times \text{Standard cost of Standard Mix} \left\{ \right. \\ \left. - (\text{Standard cost of Actual Mix}) \right.$$

In case the standard is revised due to the shortage of one material then revised standard will be used instead of standard, the formula will become:

$$\frac{\text{Total Weight of Actual Mix}}{\text{Total Weight of Revised Standard Mix}} \times \text{Standard cost of Revised Standard Mix} \left\{ \right. \\ \left. - (\text{Standard cost of Actual Mix}) \right.$$

(e) Materials Yield Variance: This is the sub-variance of material usage variance. It results from the difference between actual yield and standard yield. It may be defined as that portion of the direct materials usage variance which is due to the standard yield specified and the actual yield obtained. It may arise due to low quality of materials, defective methods of production, carelessness in handling materials, etc.

Material yield variance is calculated with the following formula:

Standard Rate (Actual yield – Standard yield)

Standard Rate is calculated as follows:

$$\text{Std. Rate} = \frac{\text{Standard Cost of Standard mix}}{\text{Net standard output i.e., Gross output – Standard Loss}}$$



There may be a situation where standard mix may be different from the actual mix. In this case the standard is revised in relation to actual mix and the question is solved with the revised standard and not with the original standard. The standard rate will be Calculated as follows:

$$\text{Std. Rate} = \frac{\text{Standard Cost of revised Standard mix}}{\text{Net standard output}}$$

In the earlier variances if the standard was more than the actual, the variance was favourable. But, in case of material yield variance the case is different. When actual yield is more than the standard yield, the variance will be favourable.

DIRECT LABOUR VARIANCES

Labour Variances are discussed as follows:

(a) Labour Cost Variance:

Labour Cost Variance or Direct Wage Variance is the difference between the standard direct wages specified for the activity and the actual wages paid. It is the function of labour rate of pay and labour time variance. It arises due to a change in either a wage rate or in time or in both. It is calculated as follows:

Labour Cost Variance = Standard Labour Cost – Actual Labour Cost

Or (Standard time x Standard Wage Rate) – (Actual Time x Actual Wage Rate)

(b) Labour Rate of Pay or Wage Rate Variance:

It is that part of labour cost variance which arises due to a change in specified wage rate. Labour rate variance arises due to (i) change in basic wage rate or piece-work rate, (ii) employing persons of different grades than specified, (iii) payment of more overtime than fixed earlier, (iv) new workers being paid different rates than the standard rates, and (v) different rates being paid to workers employed for seasonal work or excessive work load.

The wage rates are determined by demand and supply conditions of labour conditions in labour market, wage board awards, etc. So, wage rate variance is generally uncontrollable except if it arises due to the development of wrong grade of labour for which production foreman will be responsible. This variance is calculated by the formula: Labour Rate of Pay Variance = Actual time (Standard Rate – Actual Rate) The variance will be favourable if actual rate is less than the standard rate and it will be unfavourable or adverse if actual rate is more than the standard rate.

(c) Labour Efficiency or Labour Time Variance:

It is that part of labour cost variance which arises due to the difference between standard labour hours specified and the actual labour hours spent. It helps in controlling efficiency of workers. The reasons for this variance are: (i) lack of proper supervision, (ii) defective machinery and equipment, (iii) insufficient training and incorrect instructions, (iv) increase in labour turnover, (v) bad working Conditions, (vi) discontentment along workers due to unsatisfactory personnel relations, and (vii) use of non-standard material requiring more time to complete work.

Labour efficiency variance is calculated as:

Labour efficiency variance = Standard Wage Rate (Standard Time–Actual Time).

If actual time taken for doing a work is more than the specified standard time, the variance will be unfavourable. On the other hand, if actual time taken for a job is less than the standard time, the variance will be favourable.

(d) Idle Time Variance:

This variance is the standard cost of actual time paid to workers for which they have not worked due to abnormal reasons. The Reasons for idle time may be power failure, defect in machinery, and non supply of materials, etc. Idle time variance should be segregated from the labour efficiency variance otherwise



it will show inefficiency on the part of workers though they are not responsible for this. Idle time variance is always adverse and needs investigation for its causes. This variance is calculated as: Idle Time Variance-Idle Hours x Standard Rate

(e) Labour Mix or Gang Composition Variance:

This variance arises due to change in the actual gang composition than the standard gang composition. This variance shows to the management how much labour cost variance is due to the change in labour composition.

It may be calculated in two ways:

(i) When standard and actual times of the labour mix are same:

In this case the variance is calculated as follows:

Labour Mix Variance = Standard Cost of Standard Labour Mix – Standard Cost of Actual Labour Mix.

Due to the non-availability of one grade of labour, there may be a change in standard labour mix, and then revised standard will be used for standard mix. The formula will be: Labour Mix Variance = Standard cost of Revised Standard Labour Mix - Standard Cost of Actual Labour Mix.

(ii) When standard and actual time of labour mix are different:

In this case the variance will be calculated as follows:

$$\left\{ \frac{\text{Total Time of Actual Labour Mix}}{\text{Total Time of Standard Labour Mix}} \times \text{Standard cost of Standard Labour Mix} \right\} - (\text{Standard cost of Actual Labour Mix})$$

As in the earlier case, if labour composition is revised because of non-availability of one grade of labour then revised standard mix will be used instead of standard mix and the formula will become:

$$\left\{ \frac{\text{Total Time of Actual Labour Mix}}{\text{Total Time of Revised Standard Labour Mix}} \times \text{Standard cost of Revised Standard Labour Mix} \right\} - (\text{Standard cost of Actual Labour Mix})$$

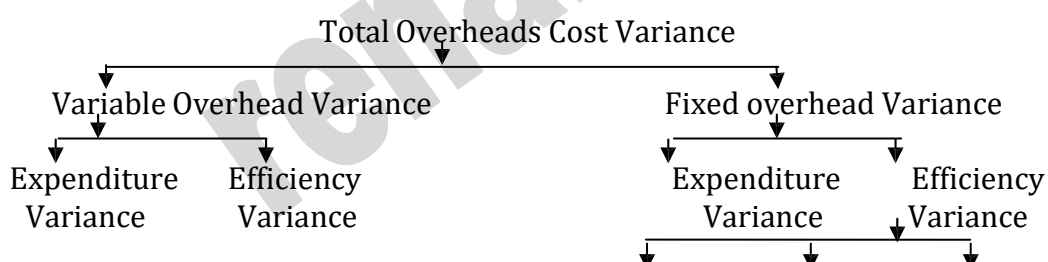
OVERHEAD VARIANCES:

Overhead is the aggregate of indirect material cost, indirect wages (indirect labour cost) and indirect expenses. Thus, overhead costs are indirect costs and are important for the management for the purposes of cost control. Under cost accounting, overhead costs are absorbed by cost units on some suitable basis. Under standard costing, overhead rates are predetermined in terms of either labour hours (per hour) or production units (per unit of output). The formula for the calculation of overhead cost variance is given below:

Overhead Cost Variance = Actual Output x Standard Overhead Rate per unit Actual Overhead Cost

or, = Standard Hours for Actual Output x Standard Overhead Rate per hour Actual Overhead Cost

An analytical study of the behaviour of overheads in relation to changes in volume of output reveals that there are some items of cost which tend to vary directly with the volume of Output whereas, there are others which remain unaffected by variations in the volume of output achieved or labour hours spent. The former costs represent the variable overhead and the latter fixed overheads. Therefore, overhead cost variances can be classified as:





Capacity Calendar Efficiency
Variance Variance Variance

(i) Variable overhead variance: Variable overheads vary directly with the volume of output and hence, the standard variable overheads vary directly with the volume of output and hence, the standard variable overhead rate remains uniform. Therefore, computation of variable overhead variance, also known as variable overhead cost variance parallels the material and labour cost variances. Thus, variable overhead cost variance (VOCV) is the difference between the standard variable overhead cost for actual output and the actual variable overhead cost. It can be calculated as follows:

$$\text{VOCV} = (\text{Actual Output} \times \text{Standard Variable Overhead Rate per unit}) - \text{Actual Variable Overheads}$$

or,
$$= (\text{Standard Hours for Actual Output} \times \text{Standard Variable Overhead Rate per hour}) - \text{Actual Variable Overheads}$$

In case information relating to standard hours allowed, for actual output and the actual time (hours) taken is available, variable overhead cost variance can be further analysed into:

- (a) Variable Overhead Expenditure or Spending Variance, and
- (b) Variable Overhead Efficiency Variance.

(a) Variable Overhead Expenditure or Spending Variance: It is the difference between the standard variable overheads for the actual hours and the actual variable overheads incurred and can be calculated as:

$$\text{Variable Overhead Expenditure Variance} = (\text{Actual Hours} \times \text{Standard Variable Overhead Rate per hour}) - \text{Actual Variable Overhead}$$

or,
$$= \text{Actual Hours} (\text{Standard Variable Overhead Rate} - \text{Actual Variable Overhead Rate})$$

(b) Variable Overhead Efficiency Variance: It represents the difference between the standard hours allowed for actual production and the actual hours taken multiplied with the standard variable overhead rate. Symbolically:

$$\text{Variable Overhead Efficiency Variance} = \text{Standard Variable Overhead Rate} (\text{Standard Hours}) - \text{Actual Hours for Actual Output}$$

(ii) FIXED OVERHEADS VARIANCE:

This variance is calculated as:
$$\text{Actual Output} \times \text{Standard Fixed Overheads Rate} - \text{Actual Fixed Overheads}$$
. (The standard fixed overhead rate is calculated by dividing budgeted fixed overheads by standard output specified). It may be divided into expenditure and volume variances.

(a) Expenditure Variance = Budgeted Fixed Overheads – Actual fixed Overheads

(b) Volume Variance: This variance shows a variation in overhead recovery due to budgeted production being more or less than the actual production. When actual production is more than the standard production, it will show an over-recovery of fixed overheads and the variance will be favourable. On the other hand, if actual production is less than the standard production it will show an under recovery and the variance will be unfavourable. Volume variance may arise due to change in capacity, variation in efficiency or change in budgeted and actual number of working days. Volume variance is calculated as:
$$\text{Actual Output} \times \text{Standard Rate} - \text{Budgeted Fixed Overheads}$$
 Volume variance is sub-divided into following variances:

(i) Capacity Variance: It is that part of volume variance which arises due to over- utilization or under-utilization of plant and equipment. The working in the factory is more or less than the standard capacity. This variance arises due to idle time caused by strikes, power failure, and non-supply of materials, break down of machinery, absenteeism etc. Capacity variance is calculated as:
$$\text{Standard Rate} (\text{Revised Budgeted Units} - \text{Budgeted Units})$$
 or,
$$\text{Standard Rate} (\text{Revised Budgeted Hrs} - \text{Budget Hrs})$$
.



(ii) Calendar Variance: This variance arises due to the difference between actual number of days and the budgeted days. It may arise due to more public holidays announced than anticipated or working for more days because of change in holidays schedule, etc. If actual working days are more than budgeted, the variance will be favourable and it will be unfavourable if actual working days are less than the budgeted number of days. Calendar variance can be expressed as:

Decrease or Increase in number of units produced due to the difference of budgeted and actual days x Standard Rate per unit.

(iii) Efficiency Variance: This is that portion of the volume variance which arises due to increased or reduced output because of more or less efficiency than expected. It signifies deviation of standard quantity from the actual quantity produced. This variance is related to the efficiency variance of labour. Efficiency variance is calculated as: Standard Rate (Actual Quantity – Standard Quantity) or, Standard Rate per hour (Standard Hours Produced – Actual Hours). If Actual quantity is more than the budgeted quantity, the variance will be favourable and it will be vice versa if actual quantity is less than the budgeted quantity.

SALES VARIANCES:

A sales value variance exposes the difference between actual sales and budgeted sales. It may arise due to change in sales price, sales volume or sales mix. It is important to study profit variances. It may be classified as follows:

1. Sales Value Variance: A Sales Value Variance is the difference between budgeted sales and actual sales. It is calculated as:

Sales Value Variance = Actual Value of Sales – Budgeted Value of Sales.

If actual sales are more than the budgeted sales, the variance will be favourable and on the other hand, the variance will be unfavourable if actual sales are less than the budgeted sales.

2. Sales Price Variance: A sales price variance arises due to the difference between the standard price specified and the actual price charged. It is calculated as: Sales Price Variance = Actual Quantity (Actual Price – Standard Price).

3. Sales Volume Variance: It is the difference between actual quantity of sales and budgeted quantity of sales. It is calculated as:

Sales Volume Variance = Standard Price (Actual Quantity of Sales – Standard Quantity of Sales).

4. Sales Mix Variance: It is the difference of standard value of revised mix and standard value of actual mix.

PROFIT AND TURNOVER METHODS OF CALCULATING SALES VARIANCES:

A businessman may be interested more in knowing variations in profits and sales. The profit and turnover methods of calculating sales variances will be useful for this purpose. The variances are analysed as follows:

(a) Total Sales Margin Variance: Actual Profit – Budgeted Profit.

Actual Profit = Actual quantity sold x Actual profit per unit.

Budgeted Profit = Budgeted quantity of Sales x Budgeted profit per unit.

(b) Sales Margin Variance due to Selling Price: This variance arises due to the difference between actual selling price and standard selling price. This variance is calculated as:

Actual Quantity (Actual Price – Standard Price)

(c) Sales Margin Variance due to Volume: This Variance arises due to the difference between actual quantity of sales and budgeted quantity of sales. It is calculated as:

Standard Profit per Unit (Actual Quantity of Sales – Standard Quantity of Sales).

(d) Sale Value Variance= Budgeted sales value-Actual sales value.

(e) Sales Volume Variance= Standard selling price per Unit (Actual Quantity of Sales – Standard Quantity of Sales).

(f) Selling Price Variance= Actual Quantity (Budgeted selling Price – Actual Selling Price).

(g) Sales Quantity Variance= Budgeted sale value-Revised standard sales value.

Budgeted sale value=Budgeted quantity x budgeted selling price per Unit



Standard sales value= Actual Quantity x budgeted selling price per Unit

Actual sales value= Actual Quantity x Actual selling price per Unit

Revised Standard sales value= Total Standard sales value x budgeted proportion.

(h) Sales Mix Variance= Revised Standard sales value -Standard sales value

ACCOUNTING TREATMENT OF VARIANCES:

When the financial statements are prepared they contain actual cost figures there is no variances. But, at the time of implementation of standard costing system, the accounting records contain both standard costs and actual costs, by which we calculate variances. Then the next question arises that how to deal with the variances at the end of the accounting period? Which method should be followed for treating them? The accountants suggest a number of methods for this purpose. Some of them are discussed, which may be adopted for the accounting treatment of variances:

1. Transfer to Profit and Loss Account: Under this method all variances are transferred to profit and loss account. In this method, the stock of finished goods, work-in-progress and cost of sales are shown at standard cost. It is considered that variances arise due to insufficiency or waste, so these should not become a part of normal cost of production.

2. Allocation of Variances to Finished Stock: In this method, variances are apportioned to finished goods, work-in-progress and cost of sales either on the basis of value of closing balances or on the basis of units. This method has the effect of recording actual costs in the financial statements. The adjustment of variances is made only in the general ledger and not in subsidiary books. The distribution of variances is not made to products. The variances not being actual losses should not be taken to profit and loss account.

3. Transfer of Variances to the Reserve Account: In this method cost variances are taken to next accounting period as deferred items. The variances whether favourable or adverse are transferred to a reserve account and are offset against future fluctuations. If the variances are favourable then they are taken to the liability side of the balance sheet and they are set off against adverse variances in future. On the other hand, if variances are adverse then these are taken to the balance sheet as a deferred charge and are written off against future favourable variances. This method is not in common use but it may be useful in cases where seasonal fluctuations occur so that favourable and adverse variances may be written off in the course of a business cycle concerning more than one accounting period.



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UNIT-IV

MARGINAL COSTING - AS A TOOLS FOR DECISION MAKING

Marginal costing is a specific technique of cost analysis in which cost information's are presented in such a manner so that it may help the management in cost control and various managerial decisions.

Marginal Cost = Prime Cost + All Variable Overheads

"The ascertainment of marginal cost and the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs is known as marginal costing."

Basic Characteristics of Marginal Costing

1. Technique of Cost Analysis and Presentation
2. Division of Costs into Fixed and Variable
3. Period Cost and Product Cost
4. Valuation of Stock
5. Determination of Price
6. Calculation of Profit
7. Recovery of Costs
8. Break-even Analysis

Assumptions of Marginal Costing

The technique of marginal costing is based on following assumptions:

1. All the elements of cost, i.e., manufacturing, administrative and selling and distribution expenses can be divided into fixed and variable components.
2. Per unit variable cost of a product remains constant at all levels of output. In other words, total variable cost price varies in proportion to the volume of output.
3. Per unit selling price remains constant at all levels of operating activity.
4. Total fixed cost remains unchanged at all levels of output.
5. In case of production in addition to present level, only marginal or variable cost is incurred as additional cost.

Main Areas of Decision-Making and Applications of Marginal and Differential Costing

Marginal costing is a very useful technique in solving various managerial problems and contributing to various areas of decisions. In this chapter, the use of marginal costing in following important areas have been discusses:

1. Make or Buy Decision
2. Change in Product Mix
3. Pricing Decisions
4. Exploring a New Market
5. Shut-down Decisions

Make or Buy Decision

'Make or Buy Decision' is a problem in respect of which management has to take decisions continuously. In this context, the management has to decide whether a certain product or a component should be made in the factory itself or bought from outside suppliers.

The nature of decision regarding make or buy may be of the following types:

- a. Stopping the production of the part and buying it from the market: A business concern is already making a part or component which is used in the business. Now due to some reasons, a decision has to take whether this part or component should be bought from the market or additional requirement due to increase in production of main factory should be made in the factory or should be bought from the market.
- b. Stopping the purchase of a component and to produce it in own factory: Another aspect of the problem of 'make' or 'buy' may be that a component or part thus far being purchased from the market should be produced or made in the factory or not. In this case, normally some extra



arrangements regarding space, labour, machines, etc. will be required. This may involve capital investments too. Some special overheads may also be necessary. If the decision for making requires the setting up of a new and separate factory, separate supervisory staff may also be needed. All these arrangements will require additional costs. As such, the price being paid to outsiders (suppliers of the component) should be compared with additional costs which will have to be incurred in the form of raw materials, wages, salaries of additional supervisors, interest on capital investments, depreciation on new machines, rent of premises, etc. If such additional costs are less than the buying price, the component should be manufactured and vice-versa.

Change in Product Mix

Introducing a New Line or Department: The problem of introducing a new product or line involves decision in two respects – (i) whether a new product or line should be added to the existing production or not, and (ii) If it should be introduced, then what should be the model or design or shape of the new product. In other words, if new product can be produced in more than one model, which model should be introduced?

A decision like above should not be based on contribution but other relevant factors should also be considered. The marginal cost of new product in all its possible models should be considered. It is also possible that a portion of the cost of facilities relating to the original production may be used for the purpose of producing new product. Some additional investments in the form of additional plant and machinery may be desired. This will likely increase the fixed overheads, which should also be considered along with marginal costs.

Selecting Optimum Product-Mix: When a company is engaged in a number of lines or products, there may arise a problem of selecting most optimum product-mix which would maximize the earning. This problem becomes complicated, when one of the factors happens to be limiting or key factors. Under such a situation, profitability will be improved only by economizing the scarce resources (key factors).

This, guiding principles for taking a decision in respect of product-mix are:

- 1) Calculate contribution per unit of key factor.
- 2) Assign ranks on the basis of highest contribution per unit of key factor.
- 3) Available key factor should be utilized in the manufacture of that product which has been assigned first rank; then in the production of product having second rank and so on.



UNIT-V BUDGETARY CONTROL

Budget: A budget is a financial and/ or quantitative statement prepared prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective.

A budget is a plan of action to achieve stated objective based on a pre-determined series of related assumption.

Budgetary control: - Budgetary control is the planning in advance of the various functions of a business, so that business as whole can be controlled.

Objective of budgetary control: - (a) A blue print (b) means of co-ordination (c) Efficiency in production work (d) control of cost (e) Economy.

Budgetary control as a management tool: - Budgetary control has become an essential tools of management for controlling costs and maximizing profits. Following are the main advantages of a budgetary control system in an organization:

- | | |
|------------------------|------------------------------------|
| 1. Profit maximization | 2. Co-ordination |
| 3. Communication | 4. Tools for measuring performance |
| 5. Corrective action | 6. Motivation |
| 7. Brings Economy | 8. Measurement of success |

Functions of Budget: the Basic functions of budgets are

1. Encourage top management to make a co-ordination plan
2. Helps in improving co-ordination
3. Keeps a control on all departments
4. Cost reduction

Difference between forecast and budget:-

Forecasting and budgeting are two important concept of budgetary control. A forecast is prediction of what will happen as a result of given set of circumstances. It is an assessment of probable future events. On the other hand "A budget is a planned result that an enterprise aims to attain. It is based on the implications of a forecast. Forecasting they proceeds is the preparation of budget.

Flexible budget:- Flexible budget (also known as variable or sliding scale budget is a budget which is designed to furnish budgeted cost for any level of activity actually attained. The easy way to prepare flexible budget is prepare budgets only for one level of activity and express each item of expenditure as a ratio or rate per unit of the volume of output. The allowance for an item of expenditure at any desired level of activity may be computed by means of simple multiplication.

Stages in budget process:

The following steps may be taken for installation of an effective system of budgetary control in an organization:

1. Defining the objectives: A system of budgetary control requires clearly defined set of objective that is to be achieved.
2. Organization for budgeting: A budgetary committee is formed which comprises the department heads of various departments. The responsibility of each executive must be clearly defined so that there should not be any uncertainty about the point where the jurisdiction of one executive ends and that of another begins.
3. Budget centers: budget centers are that part of the organization for which the budget is prepared. The budget centers are essential for cost control purpose.



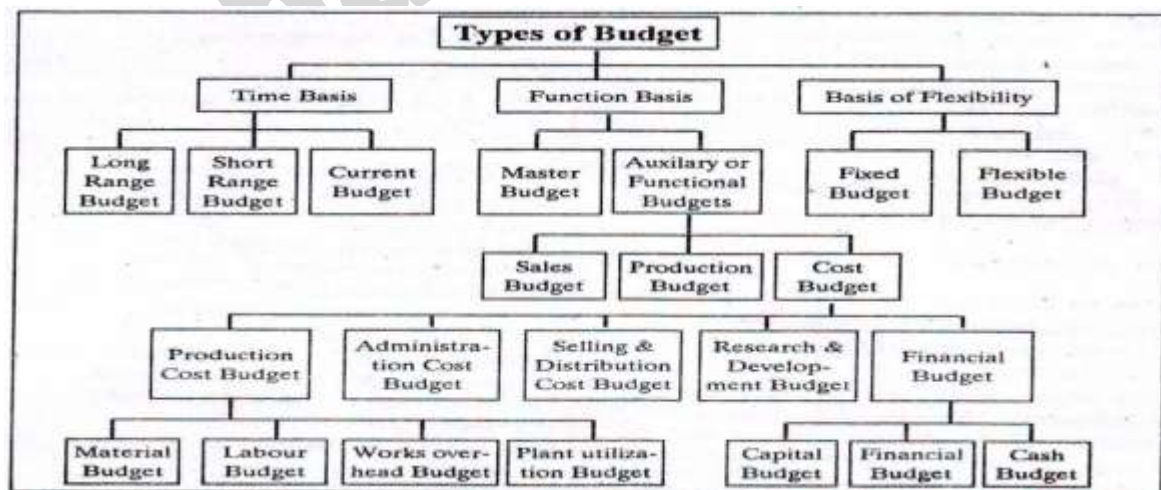
4. Budget manual: A budget manual is a written document which defines the objectives of budgeting as well as the roles and responsibilities of person engaged in the routine work.
5. Budget controller: The actual performance of different department is communicated to the budget controller. He also informs to the top management about the performance of different departments.
6. Budget committee
7. Fixation of budget period
8. Determination of key factors
9. Making forecast
10. Preparation of budget.

Types of Budgets

Budgets can be classified according to various bases. However, practically they are classified according to following three bases:

(i) On the basis of time; (ii) On the basis of functions or activities; and (iii) On the basis of flexibility

Different types of budgets can easily be understood with the help of the following chart. All the aforesaid budgets are being discussed in the following pages.



Different types of budgets have been developed keeping in view the different purposes they serve. Some of the important classifications of the budgets are discussed below.

Classification according to time:

1. Long term budgets: the budgets are prepared to show the long term planning of the organization. This budget is prepared normally for a period of 5 to 10 years.
2. Short term budgets: short term budgets are those which have to be prepared for a period of one or two years.
3. Current budget: current budget is one which has to be prepared for a very short period say a month or a quarter year and is related to the current conditions.

Classification according to function:

1. Sales budget: Sales budget is a forecast of total sales during the budget period.
2. Material budget: material budget is an estimate of quantities of raw material to be purchased for production during the budget period.
3. Labour budget: labour budget is a budget which is prepared by the personal department of the organization. It show the total hours required to complete the production target.
4. Factory overhead budget: this budget indicates the estimated costs of indirect material, indirect labour and indirect factory expenses incurred during the budget period.



5. Administrative expenses budget: in order to estimate the amount required to meet the administrative and operational activities of the organization, the administrative expenses budget is prepared.
6. Selling and distribution overhead budget: this budget is prepared by the sales manager of each territory.
7. Master budget: master budget is a budget which has to incorporate all functional budgets. The summary budget, incorporating its component functional budgets and which is finally approved adopted and employed.
8. Zero base budgeting: a planning and budgeting process which requires each manager to justify his entire budget request in detail from scratch (hence zero base) and shifts the burden of proof to each manager to justify why he should spend money at all. The approach requires that all activities be analysed in decision package which are evaluated by systematic analysis and ranked in the order of importance.
9. **Production budget** : This is the most important amongst all functional budgets. After preparing the sales budget the production budget is prepared stating physical units to be purchased during the budget period. It is intended to give in detail the production programme to be followed during twelve months of the year. In fact it specifies the number of units of each product that must be produced to satisfies the sales forecast and to achieve the desired level of closing the finished goods inventory. Essentially in production budget units to be produced are calculated as under.
$$\text{Budgeted sales} + \text{desired closing stock of finished good} - \text{opening stock of finished goods.}$$
Thus, the production budget is purely a quantitative budget. Like other budgets it is prepared by months or fortnights or quarters along with an annual budget depending upon the nature of manufacture therefore the production budget becomes the foundation for factory planning in general.
10. **Cash budget** : A cash budget is the budget of anticipated receipt and payments of cash during the budget period and is practically the main key of the whole budgetary control system. In fact, planning about the cash flows is very useful for all types of organizations since it reveals potential cash shortages as well as potential periods of excess cash. It is closely related to the sales budget and operating expenses budget. The period of time covered by a cash budget depends on the types of business, management planning needs and cash positions. The preparation of cash budget has the following objectives:
 - i. It indicated the availability of cash for taking advantages of discount.
 - ii. It shows the availability of excess funds for short term or long term investments.
 - iii. It indicates the cash requirements needed for a plant or equipments, for expansion program
 - iv. It point out the need for additional funds and,
 - v. It indicates the effect on the cash position of seasonal requirements, large inventories, unusual receipts and collection of receivables etc.

Methods of preparation of cash budgets

- i. **Receipt and payment method:** Under this methods all anticipated cash receipts are carefully forecasted such as cash sales, cash collection from debtors, proceeds from sale of debtors, Bank loans, interest on investment, royalties and dividends etc. similarly, cash disbursements for purchase of materials and supplies, purchase of plant and equipments, repayment of loans, salaries expenses, taxes and dividends etc. This method is useful for short term cash projections and not appropriate for long term cash budgeting.
- ii. **Adjusted Profit & Loss Account Method:** This method is mainly based on non-cash transactions and the basic assumption behind it is that profits will be equal to cash or the earnings of profits bring equal amount of cash into the business, it is used while preparing the long term budgets and the following information is required in this regard: (i) Expected opening cash balance; (ii) Adjusted net profit; (iii) Change in Current assets & liabilities; (iv) Capital payments as plant & Machinery, etc.; (v) Dividends, & (vi) Interest on Debentures, etc. The format of this budget is as under:



- iii. **Projected balance sheet or Balance sheet forecast method:** This method is useful for long-term forecasting of cash for a year, or for long periods. To the opening balance of cash, all anticipated changes in balance sheet items such as debtors, stock, work-in-progress, depreciation, receipts from capital assets, advance payments, net profit before taxes, dividends, capital expenditure, and decrease in the amount due to creditors are added or deducted, as the case may be. The balance shows the estimated cash in hand at the end of period. This method does not take items of expenses into account and assumes that there is a regular pattern of inflow and outflow of cash. Another disadvantage of the method is that as it shows only the cash requirements at the end of a period, any surplus or deficiency of cash occurring within the budget period is not revealed.

Budgets on the basis of flexibility

A budget may be established, either as a fixed budget or a flexible budget:

1. Fixed budget- is one which is designed for a specific planned output level and is not adjusted to the level of activity attained at the time of comparison between the budgeted and actual costs. Obviously, fixed budgets are established only for a small period of time when the actual output is not anticipated to differ much from the budgeted output.
2. Flexible budget- Flexible budget (also known as variable or sliding scale budget) is a budget which is designed to furnish budgeted costs for any level of activity actually attained. Flexible budget may also be used for adjusting budgets to current conditions arising out of seasonal variations or changes in the length of the working period. A flexible budget is more elastic, useful and practical. It takes into account the change in the actual circumstances and is useful for the purposes of control.

Distinction between fixed and flexible budgets

Following are the main differences between fixed and flexible budgets:

Point of distinction	Fixed budget	Flexible budget
1. Condition	It assumes that conditions would remain static	It is designed to change according to changed conditions.
2. Flexibility	It is not flexible and does not change with the actual volume of output achieved	It is flexible and can be recasted quickly according to level of activity attained.
3. Classification of costs	Under this budget, costs are not classified according to their variability i.e., fixed, semi-variable and variable	Under this budget, costs are classified according to their nature such as fixed, semi-variable and variable
4. Forecasting	Under this budget it is difficult to forecast the results accurately.	This budget clearly shows the impact of various expenses on the operational aspect of the business.
5. Comparison	Under this budget, comparison between actual costs and budget costs cannot be made if the volume of output differs.	Under this budget, actual costs and budgeted costs can be compared and corrective actions may be taken.
6. Ascertainment of cost	If there is a change in circumstances, it is not possible to ascertain costs accurately.	Under this budget, costs can be easily ascertained at different levels of activity.
7. Cost control	This budget is ineffective as a tool of cost control and it has a limited application.	This budget can be used as a tool for cost control and it is widely used.



MANAGEMENT REPORTS

In order to assist the management in taking appropriate action, information is communicated in the form of reports. Statement charts and graphs. The information communicated covers physical facts as well as cost data. It is the duty of the management of accountant to evolve a suitable system of reporting cost and financial information relating to the various activities in a quick, correct and efficient manner.

Meaning and definition of report: The word “report” is derived from the Latin word “Portare” which means “to carry”. So report is document which carried the information. The word report consists of two parts, viz., RE+PORT. The meaning of the word RE is again or back and PORT mean to carry. Combining these two words it means to carry the information again. It must be clear that reports are always written for any event which already occurred. So report is a written document which carries the information again.

Importance of reports and statement of management: the importance of submitting information is varied. Some of these are as follows :

1. To develop public relation 2. Control purpose 3. Mean of communication 4. Legal requirement 5. Basis to measure performance 6. Serve as record 7. Results brought to light 8. Deviation detected

Types of reports : (A) Classification on the basis of nature : according to nature, reports are divided into three categories –

1. **Enterprise reports** – these reports are prepared for the concern as whole. These reports serve as a channel of communication with outsiders.
2. **Control reports** – control reports deal with two aspects. One aspects relates to the personal performance and the second aspect deals with the economic performance.
3. **Investigative reports** – These reports are linked with control reports. In case some serious problem arises the causes of this situation are studied and analyzed. Investigative reports are based on the outcome of special solution studies.

(B) Classification on the basis of purpose : reports According to purpose may be of two types

1. **internal reports** – these reports are submitted by the management accounting department to the various level of management.
2. **periodical reports** – These reports are the reports that are rendered at periodic intervals. The interval at which routine reports are to be presented should be fixed for each report say, week, month, quarter or one year.
3. **Special reports** – These are the reports which are prepared and submitted to the management for any special purpose.
4. **Management level reports** – This group of reports includes the different types of reports which are submitted to the various level of management.
5. **Reports for top level management** – top level management consists of board of directors. Top level management is concerned with policy, planning and coordinating activities. The goals are set for the organization and policies are devised to achieve these goals.
6. **Reports for middle level management** – The reports submitted to middle level management are detailed so that a corrective view performance of different is undertaken.
7. **Reports for lower level management** – These reports provide information about the financial position of the concern on specific dates or movement of finance during a specific period.

Classification on the basis of facts –

1. **Opening reports** – These reports provides information about operations of the concern.
2. **Control Reports** – These reports are used for managerial control. They are intended to spot deviations from budgeted performance without loss of time so that corrective action can be taken.
3. **Information report** – these reports are prepared to provide useful information which will enable planning and policy formation for future.



4. **Financial reports** – these reports provide information about the financial position of the concern on specific dates or movement of finance during a specific period.

Classification on the basis of activity –

1. **Personal activity reports** – these reports are restricted only up to the activities performed under the direction of a particular officer.
2. **Joint activity report** – these reports are related to the efforts or activities of the officers jointly responsible.

Qualities of Good report: a report is prepared by putting in labour by the executives. The usefulness of the report will depend upon its quality and the way in which it has been communicated. A good report should have been the following requisites:

1. Simplicity 2. Consistency 3. Good form and content 4. Comparability 5. Frequency of reports 6. Promptness 7. Cost consideration 8. Relevance 9. Controllability 10. Accuracy

Object and function of report : The object and function or advantage of a reports are as under :

1. Timely information 2. Promptness 3. Correct information 4. Interim report 5. Cost benefit analysis 6. Information in proper format 7. Management by exception 8. Meaningful information 9. Saving in time 10. Periodical review

Limitation of reports : Through reports are very much useful to the management, they suffer from the following limitations –

1. Costly 2. Experts not easily available 3. Irrelevant 4. Changing information technology
- 2.