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MANAGEMENT ACCOUNTING

UNIT – I

MEANING OF ACCOUNTING:

Accounting is the process of recording, classifying, summarizing, analyzing and interpreting the financial transactions of the business for the benefit of management and those parties who are interested in business such as shareholders, creditors, bankers, customers, employees and government. Thus, it is concerned with financial reporting and decision making aspects of the business.

The American Institute of Certified Public Accountants Committee on Terminology proposed in 1941 that accounting may be defined as, "The art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character and interpreting the results thereof".

BRANCHES OF ACCOUNTING:

Accounting can be classified into three categories:

1. Financial Accounting
2. Cost Accounting, and
3. Management Accounting

FINANCIAL ACCOUNTING:

The term „Accounting" unless otherwise specifically stated always refers to „Financial Accounting". Financial Accounting is commonly carries on in the general offices of a business. It is concerned with revenues, expenses, assets and liabilities of a business house. Financial Accounting has two-fold objective, viz,

1. To ascertain the profitability of the business, and
2. To know the financial position of the concern.

NATURE AND SCOPE OF FINANCIAL ACCOUNTING:

Financial accounting is a useful tool to management and to external users such as shareholders, potential owners, creditors, customers, employees and government. It provides information regarding the results of its operations and the financial status of the business. The following are the functional areas of financial accounting:-

1. Dealing with financial transactions:

Accounting as a process deals only with those transactions which are measurable in terms of money. Anything which cannot be expressed in monetary terms does not form part of financial accounting however significant it is.

2. Recording of information:

Accounting is an art of recording financial transactions of a business concern. There is a limitation for human memory. It is not possible to remember all transactions of the business. Therefore, the information is recorded in a set of books called Journal and other subsidiary books and it is useful for management in its decision making process.

3. Classification of Data:

The recorded data is arranged in a manner so as to group the transactions of similar nature at one place so that full information of these items may be collected under different heads. This is done in the book called „Ledger‟. For example, we may have accounts called „Salaries‟, „Rent‟, „Interest‟, Advertisement‟, etc. To verify the arithmetical accuracy of such accounts, trial balance is prepared.

4. Making Summaries:

The classified information of the trial balance is used to prepare profit and loss account and balance sheet in a manner useful to the users of accounting

information. The final accounts are prepared to find out operational efficiency and financial strength of the business.

5. Analyzing:

It is the process of establishing the relationship between the items of the profit and loss account and the balance sheet. The purpose is to identify the financial strength and weakness of the business. It also provides a basis for interpretation.

6. Interpreting the financial information: It is concerned with explaining the meaning and significance of the relationship established by the analysis. It should be useful to the users, so as to enable them to take correct decisions.

7. Communicating the results:

The profitability and financial position of the business as interpreted above are communicated to the interested parties at regular intervals so as to assist them to make their own conclusions.

LIMITATIONS OF FINANCIAL ACCOUNTING:

Financial accounting is concerned with the preparation of final accounts. The business has become so complex that mere final accounts are not sufficient in meeting financial needs. Financial accounting is like a post-mortem report. At the most it can reveal what has happened so far, but it can not exercise any control over the past happenings. The limitations of financial accounting are as follows:-

1. It records only quantitative information.
2. It records only the historical cost. The impact of future uncertainties has no place in financial accounting.
3. It does not take into account price level changes.
4. It provides information about the whole concern. Product-wise, process-wise, department-wise or information of any other line of activity cannot be obtained separately from the financial accounting.

5. Cost figures are not known in advance. Therefore, it is not possible to fix the price in advance. It does not provide information to increase or reduce the selling price.
6. As there is no technique for comparing the actual performance with that of the budgeted targets, it is not possible to evaluate performance of the business.

7. It does not tell about the optimum or otherwise of the quantum of profit made and does not provide the ways and means to increase the profits.

8. In case of loss, whether loss can be reduced or converted into profit by means of cost control and cost reduction? Financial accounting does not answer this question.

9. It does not reveal which departments are performing well? Which ones are incurring losses and how much is the loss in each case?

10. It does not provide the cost of products manufactured

11. There is no means provided by financial accounting to reduce the wastage.

12. Can the expenses be reduced which results in the reduction of product cost and if so, to what extent and how? No answer to these questions.

13. It is not helpful to the management in taking strategic decisions like replacement of assets, introduction of new products, discontinuation of an existing line, expansion of capacity, etc.

14. It provides ample scope for manipulation like overvaluation or undervaluation. This possibility of manipulation reduces the reliability.

15. It is technical in nature. A person not conversant with accounting has little utility of the financial accounts.

COST ACCOUNTING:

An accounting system is to make available necessary and accurate information for all those who are interested in the welfare of the organization. The requirements of majority of them are satisfied by means of financial accounting. However, the management requires far more detailed information than what the

conventional financial accounting can offer. The focus of the management lies not in the past but on the future.

For a businessman who manufactures goods or renders services, cost accounting is a useful tool. It was developed on account of limitations of financial accounting and is the extension of financial accounting. The advent of factory system gave an impetus to the development of cost accounting.

OBJECTIVES OF COST ACCOUNTING:

Cost accounting was born to fulfill the needs of manufacturing companies. It is a mechanism of accounting through which costs of goods or services are ascertained and controlled for different purposes. It helps to ascertain the true cost of every operation, through a close watch, say, cost analysis and allocation. The main objectives of cost accounting are as follows:

1. Cost Ascertainment
2. Cost Control
3. Cost Reduction
4. Fixation of Selling Price
5. Providing information for framing business policy.

1. Cost Ascertainment:

The main objective of cost accounting is to find out the cost of product, process, job, contract, service or any unit of production. It is done through various methods and techniques.

2. Cost Control:

The very basic function of cost accounting is to control costs. Comparison of actual cost with standards reveals the discrepancies (Variances). The variances reveal whether cost is within control or not. Remedial actions are suggested to control the costs which are not within control.

3. Cost Reduction:

Cost reduction refers to the real and permanent reduction in the unit cost of goods manufactured or services rendered without affecting the use intended. It can be done with the help of techniques called budgetary control, standard costing, material control, labour control and overheads control.

4. Fixation of Selling Price:

The price of any product consists of total cost and the margin required. Cost data are useful in the determination of selling price or quotations. It provides detailed information regarding various components of cost. It also provides information

in terms of fixed cost and variable costs, so that the extent of price reduction can be decided.

5. Framing business policy:

Cost accounting helps management in formulating business policy and decision making. Break even analysis, cost volume profit relationships, differential costing, etc are helpful in taking decisions regarding key areas of the business like-

a. Continuation or discontinuation of production
b. Utilization of capacity
c. The most profitable sales mix
d. Key factor
e. Export decision
f. Make or buy
g. Activity planning, etc.

NATURE AND SCOPE OF COST ACCOUNTING:

Cost accounting is concerned with ascertainment and control of costs. The information provided by cost accounting to the management is helpful for cost control and cost reduction through functions of planning, decision making and control. Initially, cost accounting confined itself to cost ascertainment and presentation of the same mainly to find out product cost. With the introduction of large scale production, the scope of cost accounting was widened and providing information for cost control and cost reduction has assumed equal significance along with finding out cost of production. To start with cost accounting was applied in manufacturing activities but now it is applied in service organizations, government organizations, local authorities, agricultural farms, extractive industries and so on.

Cost accounting guides for ascertainment of cost of production. Cost accounting discloses profitable and unprofitable activities. It helps management to eliminate the unprofitable activities. It provides information for estimate and tenders. It discloses the losses occurring in the form of idle time spoilage or scrap etc. It also provides a perpetual inventory system. It helps to make effective control over inventory and for preparation of interim financial statements. It helps in controlling the cost of production with the help of budgetary control and standard costing. Cost accounting provides data for future production policies. It discloses the relative efficiencies of different workers and for fixation of wages to workers.

LIMITATIONS OF COST ACCOUNTING:

i) **It is based on estimation:** as cost accounting relies heavily on predetermined data, it is not reliable.

ii) **No uniform procedure in cost accounting**: as there is no uniform procedure, with the same information different results may be arrived by different cost accounts.

iii) **Large number of conventions and estimate**: There are number of conventions and estimates in preparing cost records such as materials are issued on an average (or) standard price, overheads are charged on percentage basis, Therefore, the profits arrived from the cost records are not true.

iv) **Formalities are more:** Many formalities are to be observed to obtain the benefit of cost accounting. Therefore, it is not applicable to small and medium firms.

v) **Expensive:** Cost accounting is expensive and requires reconciliation with financial records.

vi) **It is unnecessary:** Cost accounting is of recent origin and an enterprise can survive even without cost accounting.

vii) **Secondary data:** Cost accounting depends on financial statements for a lot of information. Any errors or short comings in that information creep into cost accounts also.

MANAGEMENT ACCOUNTING

Management accounting is not a specific system of accounting. It could be any form of accounting which enables a business to be conducted more effectively and efficiently. It is largely concerned with providing economic information to mangers for achieving organizational goals. It is an extension of the horizon of cost accounting towards newer areas of management. Much management accounting information is financial in nature but has been organized in a manner relating directly to the decision on hand.

Management Accounting is comprised of two words „Management‟ and „Accounting‟. It means the study of managerial aspect of accounting. The emphasis of management accounting is to redesign accounting in such a way that it is helpful to the management in formation of policy, control of execution and appreciation of effectiveness.

Management accounting is of recent origin. This was first used in 1950 by a team of accountants visiting U. S. A under the auspices of Anglo-American Council on Productivity

Definition:

Anglo-American Council on Productivity defines Management Accounting as, “the presentation of accounting information in such a way as to assist management to the creation of policy and the day to day operation of an undertaking”

The American Accounting Association defines Management Accounting as “the methods and concepts necessary for effective planning for choosing among alternative business actions and for control through the evaluation and interpretation of performances”.

The Institute of Chartered Accountants of India defines Management Accounting as follows: “Such of its techniques and procedures by which accounting mainly seeks to aid the management collectively has come to be known as management accounting”

From these definitions, it is very clear that financial data is recorded, analyzed and presented to the management in such a way that it becomes useful and helpful in planning and running business operations more systematically.

OBJECTIVES OF MANAGEMENT ACCOUNTING:

The fundamental objective of management accounting is to enable the management to maximize profits or minimize losses. The evolution of management accounting has given a new approach to the function of accounting. The main objectives of management accounting are as follows:

1. Planning and policy formulation:

Planning involves forecasting on the basis of available information, setting goals; framing polices determining the alternative courses of action and deciding on the programme of activities. Management accounting can help greatly in this direction. It facilitates the preparation of statements in the light of past results and gives estimation for the future.

2. Interpretation process:

Management accounting is to present financial information to the management. Financial information is technical in nature. Therefore, it must be presented in such a way that it is easily understood. It presents accounting information with the help of statistical devices like charts, diagrams, graphs, etc.

3. Assists in Decision-making process:

With the help of various modern techniques management accounting makes decision-making process more scientific. Data relating to cost, price, profit and savings for each of the available alternatives are collected and analyzed and provides a base for taking sound decisions.

4. Controlling:

Management accounting is a useful for managerial control. Management accounting tools like standard costing and budgetary control are helpful in controlling performance. Cost control is effected through the use of standard costing and departmental control is made possible through the use of budgets. Performance of each and every individual is controlled with the help of management accounting.

5. Reporting:

Management accounting keeps the management fully informed about the latest position of the concern through reporting. It helps management to take proper and quick decisions. The performance of various departments is regularly reported to the top management.

6. Facilitates Organizing:

"Return on Capital Employed" is one of the tools of management accounting. Since management accounting stresses more on Responsibility Centres with a

view to control costs and responsibilities, it also facilitates decentralization to a greater extent. Thus, it is helpful in setting up effective and efficiently organization framework.

7. Facilitates Coordination of Operations:

Management accounting provides tools for overall control and coordination of business operations. Budgets are important means of coordination.

NATURE AND SCOPE OF MANAGEMENT ACCOUNTING:

Management accounting involves furnishing of accounting data to the management for basing its decisions. It helps in improving efficiency and achieving the organizational goals. The following paragraphs discuss about the nature of management accounting.

1. Provides accounting information:

Management accounting is based on accounting information. Management accounting is a service function and it provides necessary information to different levels of management. Management accounting involves the presentation of information in a way it suits managerial needs. The accounting data collected by accounting department is used for reviewing various policy decisions.

2. Cause and effect analysis.

The role of financial accounting is limited to find out the ultimate result, i.e., profit and loss; management accounting goes a step further. Management accounting discusses the cause and effect relationship. The reasons for the loss are probed and the factors directly influencing the profitability are also studied. Profits are compared to sales, different expenditures, current assets, interest payables, share capital, etc.

3. Use of special techniques and concepts.

Management accounting uses special techniques and concepts according to necessity to make accounting data more useful. The techniques usually used include financial planning and analyses, standard costing, budgetary control, marginal costing, project appraisal, control accounting, etc.

4. Taking important decisions.

It supplies necessary information to the management which may be useful for its decisions. The historical data is studied to see its possible impact on future decisions. The implications of various decisions are also taken into account.

5. Achieving of objectives.

Management accounting uses the accounting information in such a way that it helps in formatting plans and setting up objectives. Comparing actual performance with targeted figures will give an idea to the management about the performance of various departments. When there are deviations, corrective measures can be taken at once with the help of budgetary control and standard costing.

6. No fixed norms.

No specific rules are followed in management accounting as that of financial accounting. Though the tools are the same, their use differs from concern to concern. The deriving of conclusions also depends upon the intelligence of the management accountant. The presentation will be in the way which suits the concern most.

7. Increase in efficiency.

The purpose of using accounting information is to increase efficiency of the concern. The performance appraisal will enable the management to pin-point

efficient and inefficient spots. Effort is made to take corrective measures so that efficiency is improved. The constant review will make the staff cost – conscious.

8. Supplies information and not decision.

Management accountant is only to guide and not to supply decisions. The data is to be used by the management for taking various decisions. „How is the data to be utilized‟ will depend upon the caliber and efficiency of the management.

9. Concerned with forecasting.

The management accounting is concerned with the future. It helps the management in planning and forecasting. The historical information is used to plan future course of action. The information is supplied with the object to guide management for taking future decisions.

LIMITATIONS OF MANAGEMENT ACCOUNTING:

Management Accounting is in the process of development. Hence, it suffers form all the limitations of a new discipline. Some of these limitations are:

1. Limitations of Accounting Records:

Management accounting derives its information from financial accounting, cost accounting and other records. It is concerned with the rearrangement or modification of data. The correctness or otherwise of the management accounting depends upon the correctness of these basic records. The limitations of these records are also the limitations of management accounting.

2. It is only a Tool:

Management accounting is not an alternate or substitute for management. It is a mere tool for management. Ultimate decisions are being taken by management and not by management accounting.

3. Heavy Cost of Installation:

The installation of management accounting system needs a very elaborate organization. This results in heavy investment which can be afforded only by big concerns.

4. Personal Bias:

The interpretation of financial information depends upon the capacity of interpreter as one has to make a personal judgment. Personal prejudices and bias affect the objectivity of decisions.

5. Psychological Resistance:

The installation of management accounting involves basic change in organization set up. New rules and regulations are also required to be framed which affect a number of personnel and hence there is a possibility of resistance form some or the other.

6. Evolutionary stage:

Management accounting is only in a developmental stage. Its concepts and conventions are not as exact and established as that of other branches of accounting. Therefore, its results depend to a very great extent upon the intelligent interpretation of the data of managerial use.

7. Provides only Data:

Management accounting provides data and not decisions. It only informs, not prescribes. This limitation should also be kept in mind while using the techniques of management accounting.

8. Broad-based Scope:

The scope of management accounting is wide and this creates many difficulties in the implementations process. Management requires information from both

accounting as well as non-accounting sources. It leads to inexactness and subjectivity in the conclusion obtained through it.

MANAGEMENT ACCOUNTANT

Management Accountant is an officer who is entrusted with Management Accounting function of an organization. He plays a significant role in the decision making process of an organization. The organizational position of Management Accountant varies form concern to concern depending upon the pattern of management system. He may be an executive in some concern, while a member of Board of Directors in case of some other concern. However, he occupies a key position in the organization.

In large concerns, he is responsible for the installation, development and efficient functioning of the management accounting system. He designs the frame work of the financial and cost control reports that provide with the most useful data at the most appropriate time. The Management Accountant sometimes described as Chief Intelligence Officer because apart form top management, no one in the organization perhaps knows more about various functions of the organization than him. Tandon has explained the position of Management Accountant as follows:

“The management accountant is exactly like the spokes in a wheel, connecting the rim of the wheel and the hub receiving the information. He processes the information and then returns the processed information back to where it came from”.

Role of Management Accountant

Management Accountant, otherwise called Controller, is considered to be a part of the management team since he has the responsibility for collecting vital information, both from within and outside the company. The functions of the

controller have been laid down by the Controller"s Institute of America. These functions are:

1. To establish, coordinate and administer, as an integral part of management, an adequate plan for the control of operations. Such a plan would provide, to the extent required in the business cost standards, expense budgets, sales forecasts, profit planning, and programme for capital investment and financing, together with necessary procedures to effectuate the plan.

2. To compare performance with operating plan and standards and to report and interpret the results of operation to all levels of management, and to the owners of the business. This function includes the formulation and administration of accounting policy and the compilations of statistical records and special reposts as required.

3. To consult withal segments of management responsible for policy or action conserving any phase of the operations of business as it relates to the attainment of objective, and the effectiveness of policies, organization strictures, procedures.

4. To administer tax policies and procedures.

5. To supervise and coordinate preparation of reports to Government agencies.

6. The assured fiscal protection for the assets of the business through adequate internal; control and proper insurance coverage.

7. To continuously appraise economic and social forces and government influences, and interpret their effect upon business.

Duties and Responsibilities of Management Accountant

The primary duty of Management Accountant is to help management in taking correct policy-decisions and improving the efficiency of operations. He performs a staff function and also has line authority over the accountants. If management accountant feels that a decision likely to be taken by the management based on the information tendered by him shall be detrimental to the interest of the concern, he should point out this fact to the concerned management, of course, with tact, patience, firmness and politeness. On the other hand, if the decision taken happens to be wrong one on account t of inaccuracy, biased and fabricated data furnished by the management accountant, he shall be held responsible for wrong decision taken by the management.

Controllers Institute of America has defined the following duties of Management Accountant or controller:

1. The installation and interpretation of all accounting records of the corporative.
2. The preparation and interpretation of the financial statements and reports of the corporation.
3. Continuous audit of all accounts and records of the corporation wherever located.
4. The compilation of costs of distribution.
5. The compilation of production costs.
6. The taking and costing of all physical inventories.
7. The preparation and filing of tax returns and to the supervision of all matters relating to taxes.

8. The preparation and interpretation of all statistical records and reports of the corporation.
9. The preparation as budget director, in conjunction with other officers and department heads, of an annual budget covering all activities of the corporation of submission to the Board of Directors prior to the beginning of the fiscal year. The authority of the Controller, with respect to the veto of commitments of expenditures not authorized by the budget shall, from time to time, be fixed by the board of Directors.
10. The ascertainment currently that the properties of the corporation are properly and adequately insured.
11. The initiation, preparation and issuance of standard practices relating to all accounting, matters and procedures and the co-ordination of system throughout the corporation including clerical and office methods, records, reports and procedures.
12. The maintenance of adequate records of authorized appropriations and the determination that all sums expended pursuant there into are properly accounted for.
13. The ascertainment currently that financial transactions covered by minutes of the Board of Directors and/ or the Executive committee are properly executed and recorded.
14. The maintenance of adequate records of all contracts and leases.
15. The approval for payment(and / or countersigning) of all cheques, promissory notes and other negotiable instruments of the corporation which have been signed by the treasurer or such other officers as shall have been authorized by the by=laws of the corporation or form time to time designated by the Board of Directors.

16. The examination of all warrants for the withdrawal of securities from the vaults of the corporation and the determination that such withdrawals are made in conformity with the by-laws and /or regulations established from time by the Board of Directors.

The preparation or approval of the regulations or standard practices, required to assure compliance with orders of regulations issued by duly constituted governmental agencies.

UNIT – II

RATIO ANALYSIS

Ratio Analysis is a very important tool of financial analysis. It is the process of establishing a significant relationship between the items of financial statements to provide a meaningful understanding of the performance and financial position of a firm.

Meaning of Ratio

Since, we are using the term 'ratio' in relation to financial statement analysis; it

may properly mean 'An Accounting Ratio' or 'Financial Ratio'. It may be defined as the mathematical expression of the relationship between two accounting figures. But these figures must be related to each other (i.e., these figures must have a mutual cause and effect relationship) to produce a meaningful and useful ratio. For example, the figure of turnover cannot be said to be significantly related to the figure of share premium. It indicates a quantitative relationship which the analyst may use to make a qualitative judgment about the various aspects of the financial position and performance of a concern.
In view of the requirements of various users (e.g., Short-term Creditors, Long-term Creditors, Management, Investors) of the ratios, one may classify the ratios into the following four groups:

Liquidity Ratios, Solvency Ratios, Activity Ratios and Profitability Ratios

Liquidity Ratios

These ratios measure the concern's ability to meet short-term obligations as and when they become due. These ratios show the short-term financial solvency of the concern. Usually the following two ratios are calculated for this purpose:

1. Current Ratio and 2. Quick Ratio

1. Current Ratio

(a) Meaning: This ratio establishes a relationship between current assets and current liabilities.

(b) Objective: The objective of computing this ratio is to measure the ability of the firm to meet its short-term obligations and to reflect the short-term financial strength / solvency of a firm. In other words, the objective is to measure the safety margin available for short-term creditors.

(c) Components: There are two components of this ratio which are a under:

(i) **Current Assets** which mean the assets which are held for their conversion into cash within a year and include the following:

Cash Balance	Bank Balances
Marketable Securities	Debtors (less Provision)
Bills Receivable (less Provisions)	Stock of all types, viz., Raw-Materials
Prepaid Expenses	Work-in-progress, Finished Goods
Incomes accrued but not due	Short-term Loans and Advances
Advance Payment of tax	(Debit Balances)
Tax reduced at source (Debit Balance)	Incomes due but not received

(ii) **Current Liabilities** which mean the liabilities which are expected to be matured within a year and include the following:

Creditors for Goods	Creditors for Expenses
Bills Payable	Bank Overdraft
Short-term Loans and Advances	Income received-in-advance
Provision for Tax	Unclaimed dividend

(d) Computation: This ratio is computed by dividing the current assets by the current liabilities. This ratio is usually expressed as a pure ratio e.g. 2 : I. In the form of a formula, this ratio may be expressed as under:

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

(e) Interpretation: It indicates rupees of current assets available for each rupee of current liability, Higher the ratio, greater the margin of safety for short-term creditors and vice-versa. However, too high / too low ratio calls for further investigation since the too high ratio may indicate the presence of idle funds with the firm or the absence of investment opportunities with the firm and too low ratio may indicate the over trading/under capitalization if the capital turnover ratio is high.

Traditionally, a current ratio of 2: 1 is considered to be a satisfactory ratio. On the basis of this traditional rule, if the current ratio is 2 or more, it means the firm is adequately liquid and has the ability to meet its current obligations but if the current ratio is less than 2, it means the firm has difficulty in meeting its current obligations. The logic behind this rule is that even if the value of current assets becomes half, the firm can still meet its short-term obligations.

However, the traditional standard of 2: I should not be used blindly since there may be firms having current ratio of less than 2, which are working efficiently and meeting their short-term obligations as and when they become due while the other firms having current ratio of more than 2, may not be able to meet their current obligations in time. This is so because the current ratio measures the quantity of current assets and not their quality. Current assets may consist of doubtful and slow paying debtors and slow moving and obsolete stock of goods. That is why, it can be said that current ratio is no doubt a quick measurement of a firm's liquidity but it is crude as well.

(f) Precaution: While computing and using the current ratio, it must be ensured that the quality of both receivables (debtors and bills receivable) and inventory has been carefully assessed and (b) that all current assets and current liabilities have been properly valued.

Debt Total Funds Ratio

This ratio is a variation of the debt-equity ratio and gives the similar indications as the debt-equity ratio. In this ratio, the outside long-term liabilities are related to the total capitalization of the firm and not merely to the shareholders' funds. This ratio is computed by dividing the long-term debt by the capital employed. In the form of a formula, this ratio may be expressed as under:

$$\text{Debt-Total Funds Ratio} = \frac{\text{Long-term Debt}}{\text{Capital Employed}}$$

Where, the Capital Employed comprises the long-term debt and the shareholders' funds.

Interest Coverage Ratio (or Time-interest Earned Ratio or Debt-Service Ratio)

(a) Meaning: This ratio establishes a relationship between net profits before interest and taxes and interest on long-term debt.

(b) Objective: The objective of computing this ratio is to measure the debt-servicing capacity of a firm so far as fixed interest on long-term debt is concerned.

(c) Components: There are two components of this ratio which are as under:

(i) Net profits before interest and taxes;

(ii) Interest on long-term debts.

(d) Computation: This ratio is computed by dividing the net profits before interest and taxes by interest on long-term debt. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under:

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before interest and taxes}}{\text{Interest on Long-term debt}}$$

(e) Interpretation: Interest coverage ratio shows the number of times the interest charges are covered by the profits out of which they will be paid. It indicates the limit beyond which the ability of the firm to service its debt would be adversely affected. For instance, an interest coverage of five times would imply that even if the firm's net profits before interest and tax were to decline to 20% of the present level, the firm will still be able to pay interest out of profits. Higher the ratio, greater the firm's ability to pay interest but very high ratio may imply lesser use of debt and/or very efficient operations.

ACTIVITY RATIOS

These ratios measure the effectiveness with which a firm uses its available resources. These ratios are also called 'Turnover Ratios' since they indicate the speed with which the resources are being turned (or converted) into sales. Usually the following turnover ratios are calculated:

I. Capital Turnover Ratio

II. Fixed Assets Turnover Ratio,

III. Net Working Capital Turnover Ratio

IV. Stock Turnover Ratio

V. Debtors Turnover Ratio.

VI. Creditors Turnover Ratio.

Capital Turnover Ratio

(a) Meaning: This ratio establishes a relationship between net sales and capital employed.

(b) Objective: The objective of computing this ratio is to determine the efficiency with which the capital employed is utilized.

(c) Components: There are two components of this ratio which are as under:

(i) Net Sales which mean gross sales minus sales returns; and

(ii) Capital Employed which means Long-term Debt plus Shareholders' Funds.

(d) Computation: This ratio is computed by dividing the net sales by the capital employed. This ratio is usually expressed as 'x' number of times. In the form of a formula this ratio may be expressed as under:

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

(e) Interpretation: It indicates the firm's ability to generate sales per rupee of capital employed. In general, the higher the ratio the more efficient the management and utilization of capital employed. A too high ratio may indicate the situation of an over-trading (or under. capitalization) if current ratio is lower than that required reasonably and vice versa.

Fixed Assets Turnover Ratio

(a) Meaning: This ratio establishes a relationship between net sales and fixed assets.

(b) Objective: The objective of computing this ratio is to determine the

efficiency with which the fixed assets are utilized.

(c) Components: There are two components of this ratio which are as under:

(i) Net Sales which means gross sales minus sales returns;

(ii) Net Fixed (operating) Assets which mean gross fixed assets minus depreciation thereon.

(d) Computation This ratio is computed by dividing the net sales by the net fixed assets. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under:

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

(e) Interpretation: It indicates the firm's ability to generate sales per rupee of investment in fixed assets. In general, higher the ratio, the more efficient the management and utilization of fixed assets, and vice versa. It may be noted that there is no direct relationship between sales and fixed assets since the sales are influenced by other factors as well (e.g., quality of product, delivery terms, credit terms, after sales service, advertisement and publicities.)

Working Capital Turnover Ratio

(a) Meaning: This ratio establishes a relationship between net sales and working capital.

(b) Objective: The objective of computing this ratio is to determine the efficiency with which the working capital is utilized.

(c) Components: There are two components of this ratio which are as under:

(i) Net Sales which mean gross sales minus sales returns; and

(ii) Working Capital which means current assets minus current liabilities.

(d) Computation: This ratio is computed by dividing the net sales by the working i capital. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under:

$$\text{Working Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Working Capital}}$$

Interpretation: It indicates the firm's ability to generate sales per rupee of working capital. In general, higher the ratio, the more efficient the management and utilization of, working capital and vice versa.

Stock Turnover Ratio

(a) Meaning: This ratio establishes a relationship between costs of goods sold and aver age inventory.

(b) Objective: The objective of computing this ratio is to determine the efficiency with which the inventory is utilized.

(c) Components: There are two components of this ratio which are as under:

(i) Cost of Goods Sold, this is calculated as under.

Cost of Goods Sold = Opening Inventory + Net Purchases + Direct Expenses - Closing Inventory = Net Sales - Gross Profit

(ii) Average Inventory which is calculated as under:

Average Inventory = (Opening Inventory plus Closing Inventory)/2

(d) Computation: This ratio is computed by dividing the cost of goods sold by the average inventory. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under: -

$$\frac{\text{Cost of Goods Sold}}{}$$

Stock Turnover Ratio =

Average Inventory

(e) Interpretation: It indicates the speed with which the inventory is converted into sales. In general, a high ratio indicates efficient performance since an improvement in the ratio shows that either the same volume of sales has been maintained with a lower investment in stocks, or the volume of sales has increased without any increase in the amount of stocks. However, too high ratio and too low ratio calls for further investigation. A too high ratio may be the result of a very low inventory levels which may result in frequent stock-outs and thus the firm may incur high stock-out costs. On the other hand, a too low ratio may be the result of excessive inventory levels, slow-moving or obsolete inventory and thus, the firm may incur high carrying costs. Thus, a firm should have neither a very high nor a very low stock turnover ratio, it should have a

satisfactory level. To judge whether the ratio is satisfactory or not, it should be compared with its own past ratios or with the ratio of similar firms in the same industry or with industry average.

(f) Stock Velocity- This velocity indicates the period for which sales can be generated with the help of an average stock maintained and is usually expressed in days. This velocity may be calculated as follows:

$$\text{Stock Velocity} = \frac{\text{Average stock}}{\text{Average Daily cost of Goods Sold}}$$

$$\text{Or } \frac{\text{12 months /52 weeks /365 days}}{\text{Stock Turnover Ratio}}$$

UNIT – III

CASH FLOW ANALYSIS

Cash flow analysis is another important technique of financial analysis. It involves preparation of Cash Flow Statement for identifying sources and applications of cash; Cash flow statement may be prepared on the basis of actual or estimated data. In the latter case, it is termed as 'Projected Cash Flow Statement', which is synonymous with the term 'Cash Budget'. In the following pages we shall explain in detail in preparation of cash flow statement, utility and limitations of cash flow analysis etc.

MEANING OF CASH FLOW STATEMENT

A Cash Flow Statement is a statement depicting change in cash position from one period to another. For example, if the cash balance of a business is shown by its Balance Sheet on 31st December, 1998 at Rs. 20,000 while the cash balance as per its Balance Sheet on 31st December, 1999 is Rs. 30,000, there has been an inflow of cash of Rs. 10,000 in the year 1999 as compared to the year 1998. The cash flow statement explains the reasons for such inflows or outflows of cash, as the case may be. It also helps management in making plans for the immediate future. A Projected Cash Flow Statement or a Cash Budget will help the management in ascertaining how much cash will be available to meet obligations to trade creditors, to pay bank loans and to pay dividend to the shareholders. A proper planning of the cash resources will enable the management to have cash available whenever needed and put it to some profitable or productive use in case there is surplus cash available.

The term "Cash" here stands for cash and bank balances. In a narrower sense, funds are also used to denote cash. In such a case, the term "Funds" will exclude from its purview all other current assets and current liabilities and the terms "Funds Flow Statement" and "Cash Flow Statement" will have synonymous meanings. However, for the purpose of this study we are calling this part of study Cash Flow Analysis and not Funds Flow analysis.

PREPARATION OF CASH FLOW STATEMENT

Cash Flow Statement can be prepared on the same pattern on which a Funds Flow Statement is prepared. The change in the cash position from one period to another is computed by taking into account "Sources" and" Applications" of cash.

Sources of Cash

Sources of cash can be both internal as well as external:

Internal Sources- Cash from operations is the main internal source. The Net Profit shown by the Profit and Loss Account will have to be adjusted for non-

cash items for finding out cash from operations. Some of these items are as follows:

i) Depreciation. Depreciation does not result in outflow of cash and, therefore, net profit will have to be increased by the amount of depreciation or development rebate charged, in order to find out the real cash generated from operations.

(ii) Amortization of Intangible Assets. Goodwill, preliminary expenses, *etc.,* when written off against profits, reduce the net profits without affecting the cash balance. The amounts written off should, therefore, be added back to profits to find out the cash from operations.

iii) Loss on Sale of Fixed Assets. It does not result in outflow of cash and**,** therefore, should be added back to profits.

iv)* Gains *from Sale of Fixed Assets. Since sale of fixed assets is taken as a separate source of cash, it should be deducted from net profits.

v) Creation of Reserves. If profit for the year has been arrived at after charging transfers to reserves, such transfers should be added back to profits. In case operations show a net loss, such net loss after making adjustments for non-cash items will be shown as an application of cash.

Thus, cash from operations is computed on the pattern of computation of 'Funds' from operations, as explained in an earlier chapter. However, to find out real cash from operations, adjustments will have to be made for 'changes' in current

assets and current liabilities arising on account of operations, *viz.,* trade debtors, trade creditors, bills receivable, bills payable, *etc.*

For the sake of convenience computation of cash from operations can be studied by taking two different situations:

(1) When all transactions are cash transactions, and

(2) When all transactions are not cash transactions.

Adjustments for Changes in Current Assets and Current Liabilities

In the illustration given above, the cash from operations has been computed on the same pattern on which funds from operations are computed. As a matter of fact, the fund from operations is equivalent to cash from operations in. this case. This is because of the presumption that all are cash transactions and all goods have been sold. However, there may be credit purchases, credit sales, outstanding and prepaid expenses, *etc.* In such a case, adjustments will have to be made for each of these items in order to find out cash from operations. This has been explained in the following pages:

(i) **Effect of Credit Sales.** In business, there are both cash sales and credit sales. In case, the total sales are Rs. 30,000 out of which the credit sales are Rs. 10,000, it means sales have contributed only to the extent of Rs. 20,000 in providing cash from operations. Thus, while computing cash from operations, it will be necessary that suitable adjustments for outstanding debtors are also made.

(ii) **Effect of Credit Purchases.** Whatever has been stated regarding credit sales is also applicable to credit purchases. The only difference will be that decrease in creditors from one period to another will result in decrease of cash from operations because it means more cash payments have been made to the creditors which will result in outflow of cash. On the other hand, increase in creditors from one period to another will result in increase of cash from operations because less payment has been made to the creditors for goods supplied which will result in increase of cash balance at the disposal of the business.

(iii) **Effect of Opening and Closing Stocks.** The amount of opening stock is charged to the debit side of the Profit & Loss Account. It thus reduces the net profit without reducing the cash from operations.

Similarly, the amount of closing stock is put on the credit side of the Profit and Loss Account. It thus increases the amount of net profit without increasing the cash from operations.

(iv) **Effect of Outstanding Expenses, Incomes received in Advance, *etc.*** The effect of these items on cash from operations is similar to the effect of creditors. This means any increase in these items will result in increase in cash from operations while any decrease means decrease in cash from operations. This is because net profit from operations is computed after charging to it all expenses whether paid or outstanding. In case certain expenses have not been paid, this will result in decrease of net profit without a corresponding decrease in cash from operations. Similarly, income received in advance is not taken into account while calculating profit from operations, since it relates to the next year. It, therefore, means cash from operations will be higher than the actual net profit as shown by the Profit and Loss Account.

External Sources

The external sources of cash are:

(i) *Issue of New Shares.* In case shares have been issued for cash, the net cash received *(i.e.,* after deducting expenses on issue of shares or discount on issue of shares) will be taken as a source of cash.

(ii) *Raising Long-term Loans.* Long-term loans such as issue of debentures, loans from Industrial Finance Corporation, State Financial Corporations,

I.D.B.I., etc., are sources of cash. They should be shown separately.

(iii)Purchase of Plant and Machinery on Deferred Payments. In case plant and machinery has been purchased on a deferred payment system, it should be shown as a separate source of cash to the extent of deferred credit. However, the cost of machinery purchased will be shown as an application of cash.

(iv) *Short-term Borrowings-Cash Credit from Banks*. Short-term borrowings, etc., from banks increase cash available and they have to be shown separately under this head.

(v) *Sale of Fixed Assets, Investment, etc.* It results in generation of cash and therefore, is a source of cash.

Decrease in various current assets and increase in various current liabilities may be taken as external sources of cash, if they are not adjusted while computing cash from operations.

Applications of Cash

Applications of cash may take any of the following forms:

(i) *Purchase of Fixed Assets.* Cash may be utilized for additional fixed assets or renewals or replacement of existing fixed assets.

(ii) *Payment of Long-term Loans.* The payment of long-term loans such as loans from financial institutions or debentures results in decrease in cash. It is, therefore, an application of cash.

(iii) *Decrease in Deferred Payment Liabilities.* Payments for plant and machinery purchased on deferred payment basis have to be made as per the agreement. It is, therefore, an application of cash.

(iv) *Loss on Account of Operations.* Loss suffered on account of business operations will result in outflow of cash.

(v) *Payment of Tax.* Payment of tax will result in decrease of cash and hence it is an application of cash.

(vi) *Payment of Dividend.* This decreases the cash available for business and hence it is an application of cash.

(vii) *Decrease in Unsecured Loans, Deposits, etc.* The decrease in these liabilities denotes that they have been paid off to that extent. It results, therefore outflow of cash.

Increase in various current assets or decrease in various current liabilities may be shown as applications of cash, if changes in these items have not been adjusted while finding out cash from operations.

Format of a Cash Flow Statement

A cash flow statement can be prepared in the following form.

CASH FLOW STATEMENT *for the year ending on……………..*

Balance as on 1.1.19..		
Cash Balance	……….	
Balance	…….....	
Add: Sources of Cash:	___	
Issue of Shares		
Raising of Long-term Loans		………
Sale of Fixed Assets		………

Short-term Borrowings		....
Cash from operations:		....
Profit as per Profit and Loss Account	....	
Add/Less: Adjustment for Non-cash Items	....	
Add: Increase in Current Liabilities	....	
Decrease in Current Assets	....	
Less: Increase in Current Assets	--	....
Decrease in Current Liabilities	....	--
Total Cash available (1)	--	....
Less: *Applications of Cash:*		--
Redemption of Redeemable Preference Shares		....
Redemption of Long-term Loans		....
Purchase of Fixed Assets		....
Decrease in Deferred Payment Liabilities		....
Cash Outflow on account of Operations		....
Tax paid		....
Dividend paid		....
Decrease in Unsecured loans, Deposits, etc.,		....
Total Applications (2)		....
Closing Balances*		....
Cash balance		

Bank balance		

* These totals should tally with the balance as shown by (1) - (2).

DIFFERENCE BETWEEN CASH FLOW ANALYSIS AND FUNDS FLOW ANALYSIS

Following are the points of difference between a Cash Flow Analysis and a Funds Flow Analysis:

(1) A Cash Flow Statement is concerned only with the change in cash position while a Funds Flow Analysis is concerned with change in working capital position between two balance sheet dates. Cash is only one of the constituents of working capital besides several other constituents such, as inventories, accounts receivable, prepaid expenses.

(2) A Cash Flow Statement is merely a record of cash receipts, and 'disbursements. Of course, it is valuable in its own way but it fails to bring to light many important changes involving the disposition of resources. While studying the short-term solvency of a business one is interested not only in cash balance but also in the assets which are easily convertible into cash.

(3) Cash flow analysis is more useful to the management as a tool of financial analysis in short period as compared to funds flow analysis. It has rightly been said that shorter the period covered by the analysis, greater is the importance of cash flow analysis. For example, if it is to be found out whether the business can meet its obligations maturing after 10 years from now, a good estimate can be made about firm's capacity to meet its long-term obligations if changes in working capital position on account of operations are observed. However, if the firm's capacity to

meet a liability maturing after one month is to be seen, the realistic approach would be to consider the projected change in the cash position rather than an expected change in the working capital position.

(4) Cash is part of working capital and, therefore, an improvement in cash position results in improvement in the funds position but the reverse is not true. In other words, "inflow of cash" results in "inflow of funds" but "inflow of funds" may not necessarily result in "inflow of cash". Thus sound funds position does not necessarily mean a sound cash position but a sound cash position generally means a sound funds position.

(5) Another distinction between a cash flow analysis and a funds flow analysis can be made on the basis of the techniques of their preparation. An increase in a current liability or decrease in a current asset results in decrease in working capital and *vice versa.* While an increase in a current liability or decrease in current asset (other than cash) will result in increase in cash and *vice versa,*

Some people, as stated earlier, use term 'Funds' in a very narrow sense of cash only. In such an event the two terms 'Funds' and 'Cash' will have synonymous in meanings.

UTILITY OF CASH FLOW ANALYSIS

A Cash Flow Statement is useful for short-term planning. A business enterprise needs sufficient cash to meet its various obligations in the near future such as payment for purchase of fixed assets, payment of debts maturing in the near future, expenses of the business, etc. A historical analysis of the different sources and applications of cash will enable the management to make reliable cash flow projections for the immediate future. It may then plan out for investment of surplus or meeting the deficit, if any. Thus, a cash flow analysis is an important financial tool for the management. Its chief advantages are as follows:

1. Helps in Efficient Cash Management

Cash flow analysis helps in evaluating financial policies and cash position. Cash is the basis for all operations and hence a projected cash flow statement will enable ill management to plan and co-ordinate the financial operations properly. The management can know how much cash is needed, from which source it will be derived, how much can be generated internally and how much could be obtained from outside.

2. Helps in Internal Financial Management

Cash flow analysis provides information about funds which will be available from operations. This will help the management in determining policies regarding internal financial management, *e.g.,* possibility of repayment of long-term debt, dividend policies, planning replacement of plant and machinery, *etc.*

3. Discloses the Movements of Cash

Cash flow statement discloses the complete story of cash movement. The increase in or decrease of, cash and the reason therefore can be known. It discloses the reasons for low cash balance in spite of heavy operating profits or for heavy cash balance in spite of low profits. However, comparison of original forecast with the actual results highlights the trends of movement of cash which may otherwise go undetected.

4. Discloses Success or Failure of Cash Planning

The extent of success or failure of cash planning can be known by comparing the projected cash flow statement with the actual cash flow statement and necessary remedial measures can be taken.

LIMITATIONS OF CASH FLOW ANALYSIS

Cash flow analysis is a useful tool of financial analysis. However, it has its own limitations. These limitations are as under:

(1) Cash flow statement cannot be equated with the Income Statement. An Income Statement takes into account both cash as well as non-cash items and, therefore, net cash flow does not necessarily mean net income of the business.

(2) The cash balance as disclosed by the cash flow statement may not represent the real liquid position of the business since it can be easily influenced by postponing purchases and other payments.

(3) Cash flow statement cannot replace the Income Statement or the Funds Flow Statement. Each of them has a separate function to perform.

In spite of these limitations, it can be said that cash flow statement is a useful supplementary instrument. It discloses the volume as well as the speed at which the cash flows in the different segments of the business. This helps the management in knowing the amount of capital tied up in a particular segment of the business. The technique of cash flow analysis, when used in conjunction with ratio analysis, serves as a barometer in measuring the profitability and financial position of the business.

UNIT - IV

BUDGETS AND BUDGETORY CONTROL

Introduction:

To achieve the organizational objectives, an enterprise should be managed effectively and efficiently. It is facilitated by chalking out the course of action in advance. Planning, the primary function of management helps to chalk out the course of actions in advance. But planning is to be followed by continuous comparison of the actual performance with the planned performance, i. e., controlling. One systematic approach in effective follow up process is budgeting. Different budgets are prepared by the enterprise for different purposes. Thus, budgeting is an integral part of management.

Definition of Budget:

„A budget is a comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future‟. **(Fremgen, James M – Accounting for Managerial Analysis)**

„A budget is a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance‟. **(Gordon and Shillinglaw)**

„A budget is a financial and/or quantitative statement, prepared prior to a defined period of time, of the policy to be pursued during the period for the purpose of attaining a given objective‟. **(The Chartered Institute of Management Accountants, London)**

Elements of Budget:

The basic elements of a budget are as follows:-

1. It is a comprehensive and coordinated plan of action.

2. It is a plan for the firm‟s operations and resources.
3. It is based on objectives to be attained.
4. It is related to specific future period.
5. It is expressed in financial and/or physical units.

Budgeting:

Budgeting is the process of preparing and using budgets to achieve management objectives. It is the systematic approach for accomplishing the planning, coordination, and control responsibilities of management by optimally utilizing the given resources.

„The entire process of preparing the budgets is known as Budgeting‟ **(J. Batty)**

„Budgeting may be said to be the act of building budgets‟ **(Rowland & Harr)**

Elements of Budgeting:

1. A good budgeting should state clearly the firm‟s expectations and facilitate their attainability.
2. A good budgeting system should utilize various persons at different levels while preparing the budgets.
3. The authority and responsibility should be properly fixed.
4. Realistic targets are to be fixed.
5. A good system of accounting is also essential.
6. Wholehearted support of the top management is necessary.
7. Budgeting education is to be imparted among the employees.
8. Proper reporting system should be introduced.
9. Availability of working capital is to be ensured.

Definition of Budgetary Control:

CIMA, London defines budgetary control as, "the establishment of the budgets relating to the responsibility of executives to the requirements of a policy and the continuous comparison of actual with budgeted result either to secure by individual action the objectives of that policy or to provide a firm basis for its revision"

„Budgetary Control is a planning in advance of the various functions of a business so that the business as a whole is controlled‟. **(Wheldon)**

„Budgetary Control is a system of controlling costs which includes the preparation of budgets, coordinating the department and establishing responsibilities, comprising actual performance with the budgeted and acting upon results to achieve maximum profitability‟. **(Brown and Howard)**

Elements of budgetary control:

1. Establishment of budgets for each function and division of the organization.
2. Regular comparison of the actual performance with the budget to know the variations from budget and placing the responsibility of executives to achieve the desire result as estimated in the budget.
3. Taking necessary remedial action to achieve the desired objectives, if there is a variation of the actual performance from the budgeted performance.
4. Revision of budgets when the circumstances change.
5. Elimination of wastes and increasing the profitability.

Budget, Budgeting and Budgetary Control:

A budget is a blue print of a plan expressed in quantitative terms. Budgeting is a technique for formulating budgets. Budgetary Control refers to the principles, procedures and practices of achieving given objectives through budgets.

According to Rowland and William, „Budgets are the individual objectives of a department, whereas Budgeting may be the act of building budgets. Budgetary control embraces all and in addition includes the science of planning the budgets to effect an overall management tool for the business planning and control‟.

Objectives of Budgetary Control

Budgetary Control assists the management in the allocation of responsibilities and is a useful device to estimate and plan the future course of action. The general objectives of budgetary control are as follows:

1. Planning:

(a) A budget is an action plan as it is prepared after a careful study and research.

(b) A budget operates as a mechanism through which objectives and policies are carried out.

(c) It is a communication channel among various levels of management.

(d) It is helpful in selecting a most profitable alternative.

(e) It is a complete formulation of the policy of the concern to be pursued for attaining given objectives.

2. Co-ordination:

It coordinates various activities of the business to achieve its common objectives. It induces the executives to think and operate as a group.

3. Control:

Control is necessary to judge that the performance of the organization confirms to the plans of business. It compares the actual performance with that of the budgeted performance, ascertains the deviations, if any, and takes corrective action at once.

Installation of Budgetary Control:

There are certain steps necessary to install a good budgetary control system in an organization. They are as follows:

1. Determination of the Objectives
2. Organization for Budgeting
3. Budget Centre
4. Budget Officer
5. Budget Manual
6. Budget Committee
7. Budget Period
8. Determination of Key Factor

1. Determination of Objectives:

It is very clear that the installation of a budgetary control system presupposes the determination of objectives sought to be achieved by the organization in clear terms.

2. Organization for Budgeting:

Having determined the objectives clearly, proper organization is essential for the successful preparation, maintenance and administration of budgets. The responsibility of each executive must be clearly defined. There should be no uncertainty regarding the jurisdiction of executives.

3. Budget Centre:

It is that part of the organization for which the budget is prepared. It may be a department or any other part of the department. It is essential for the appraisal of performance of different departments so as to make them responsible for their budgets.

4. Budget Officer:

A Budget Officer is a convener of the budget committee. He coordinates the budgets of various departments. The managers of different departments are made responsible for their department‟s performance.

5. Budget Manual:

It is a document which defines the objectives of budgetary control system. It spells out the duties and responsibilities of budget officers regarding the preparation and execution of budgets. It also specifies the relations among various functionaries.

6. Budget Committee:

The heads of all important departments are made members of this committee. It is responsible for preparation and execution of budgets. The members of this committee may sometimes take collective decisions, if necessary. In small concerns, the accountant is made responsible for the same work.

7. Budget Period:

It is the period for which a budget is prepared. It depends upon a number of factors. It may be different for different concerns/functions. The following are the factors that may be taken into consideration while determining budget period:

a. The type of budget,

b. The nature of demand for the products,

c. The availability of finance,

d. The economic situation of the cycle and

e. The length of trade cycle

8. Determination of Key Factor:

Generally, the budgets are prepared for all functional areas of the business. They are inter related and inter dependent. Therefore, a proper coordination is necessary. There may be many factors that influence the preparation of a budget. For example, plant capacity, demand position, availability of raw materials, etc. Some factors may have an impact on other budgets also. A factor which influences all other budgets is known as Key factor. The key factor may not remain the same. Therefore, the organization must pay due attention on the key factor in the preparation and execution of budgets.

Types of Budgeting:

Budget can be classified into three categories from different points of view.
They are:

1. According to Function
2. According to Flexibility
3. According to Time

I. According to Function:

(a) Sales Budget:

The budget which estimates total sales in terms of items, quantity, value, periods, areas, etc is called Sales Budget.

(b) Production Budget:

It estimates quantity of production in terms of items, periods, areas, etc. It is prepared on the basis of Sales Budget.

(c) Cost of Production Budget:

This budget forecasts the cost of production. Separate budgets may also be prepared for each element of costs such as direct materials budgets, direct labour budget, factory materials budgets, office overheads budget, selling and distribution overheads budget, etc.

(d) Purchase Budget:

This budget forecasts the quantity and value of purchase required for production. It gives quantity wise, money wise and period wise particulars about the materials to be purchased.

(e) Personnel Budget:

The budget that anticipates the quantity of personnel required during a period for production activity is known as Personnel Budget.

(f) Research Budget:

The budget relates to the research work to be done for improvement in quality of the products or research for new products.

(g) Capital Expenditure Budget:

The budget provides a guidance regarding the amount of capital that may be required for procurement of capital assets during the budget period.

(h) Cash Budget:

This budget is a forecast of the cash position by time period for a specific duration of time. It states the estimated amount of cash receipts and estimation of cash payments and the likely balance of cash in hand at the end of different periods.

(i) Master Budget:

It is a summary budget incorporating all functional budgets in a capsule form. It interprets different functional budgets and covers within its range the preparation of projected income statement and projected balance sheet.

II. According to Flexibility:

On the basis of flexibility, budgets can be divided into two categories. They are:

1. Fixed Budget
2. Flexible Budget

1. Fixed Budget:

Fixed Budget is one which is prepared on the basis of a standard or a fixed level of activity. It does not change with the change in the level of activity.

2. Flexible Budget:

A budget prepared to give the budgeted cost of any level of activity is termed as a flexible budget. According to CIMA, London, a Flexible Budget is, „a budget designed to change in accordance with level of activity attained‟. It is prepared by taking into account the fixed and variable elements of cost.

III. According to Time:

On the basis of time, the budget can be classified as follows:

1. Long term budget
2. Short term budget
3. Current budget
4. Rolling budget

1. Long-term Budget:

A budget prepared for considerably long period of time, viz., 5 to 10 years is called Long-term Budget. It is concerned with the planning of operations of the firm. It is generally prepared in terms of physical quantities.

2. Short-term Budget:

A budget prepared generally for a period not exceeding 5 years is called Short-term Budget. It is generally prepared in terms of physical quantities and in monetary units.

3. Current Budget:

It is a budget for a very short period, say, a month or a quarter. It is adjusted to current conditions. Therefore, it is called current budget.

4. Rolling Budget:

It is also known as Progressive Budget. Under this method, a budget for a year in advance is prepared. A new budget is prepared after the end of each month/quarter for a full year ahead. The figures for the month/quarter which has rolled down are dropped and the figures for the next month/quarter are added. This practice continues whenever a month/quarter ends and a new month/quarter begins

.

PREPARATION OF BUDGETS:

I. SALES BUDGET:

Sales budget is the basis for the preparation of other budgets. It is the forecast of sales to be achieved in a budget period. The sales manager is directly responsible for the preparation of this budget. The following factors taken into consideration:

a. Past sales figures and trend
b. Salesmen‟s estimates
c. Plant capacity
d. General trade position
e. Orders in hand
f. Proposed expansion
g. Seasonal fluctuations
h. Market demand
i. Availability of raw materials and other supplies
j. Financial position
k. Nature of competition
l. Cost of distribution
m. Government controls and regulations
n. Political situation.

III. CASH BUDGET:

It is an estimate of cash receipts and disbursements during a future period of time. "The Cash Budget is an analysis of flow of cash in a business over a future, short or long period of time. It is a forecast of expected cash intake and outlay" (Soleman, Ezra – Handbook of Business administration).

Procedure for preparation of Cash Budget:

1. First take into account the opening cash balance, if any, for the beginning of the period for which the cash budget is to be prepared.

2. Then Cash receipts from various sources are estimated. It may be from cash sales, cash collections from debtors/bills receivables, dividends, interest on investments, sale of assets, etc.

3. The Cash payments for various disbursements are also estimated. It may be for cash purchases, payment to creditors/bills payables, payment to revenue and capital expenditure, creditors for expenses, etc.

4. The estimated cash receipts are added to the opening cash balance, if any.

5. The estimated cash payments are deducted from the above proceeds.

6. The balance, if any, is the closing cash balance of the month concerned.

7. The closing cash balance is taken as the opening cash balance of the following month.

8. Then the process is repeatedly performed.

9. If the closing balance of any month is negative i.e the estimated cash payments exceed estimated cash receipts, then overdraft facility may also be arranged suitably.

IV. FLEXIBLE BUDGET:

A flexible budget consists of a series of budgets for different level of activity. Therefore, it varies with the level of activity attained. According to CIMA,

London, A Flexible Budget is, „a budget designed to change in accordance with level of activity attained‟. It is prepared by taking into account the fixed and variable elements of cost. This budget is more suitable when the forecasting of demand is uncertain.

Points to be remembered while preparing a flexible budget:

1. Cost can be classified into fixed and variable cost.
2. Total fixed cost remains constant at any level of activity.
3. Total Variable cost varies in the same proportion at which the level of activity varies.
4. Fixed and variable portion of Semi-variable cost is to be segregated.

ZERO BASE BUDGETING (ZBB)

It is a management technique aimed at cost reduction. It was introduced by the U. S. Department of Agriculture in 1961. Peter A. Phyrr popularized it. In 1979, president Jimmy Carte issued a mandate asking for the use of ZBB by the Government.

ZBB - Definition:

"It is a planning and budgeting process which requires each manager to justify his entire budget request in detail from scratch (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 analyzed in decision packages, which are evaluated by systematic analysis and ranked in the order of importance". – Peter A. Phyrr.

It implies that-

- Every budget starts with a zero base
- No previous figure is to be taken as a base for adjustments
- Every activity is to be carefully examined afresh
- Each budget allocation is to be justified on the basis of anticipated circumstances
- Alternatives are to be given due consideration

Advantages of ZBB:

1. Effective cost control can be achieved
2. Facilitates careful planning
3. Management by Objectives becomes a reality
4. Identifies uneconomical activities
5. Controls inefficiencies
6. Scarce resources are used beneficially
7. Examines each activity thoroughly
8. Controls wasteful expenditure
9. Integrates the management functions of planning and control
10. Reviews activities before allowing funds for them.

PERFORMANCE BUDGETING:

It involves evaluation of the performance of the organization in the context of both specific as well as overall objectives of the organization. It provides a definite direction to each employee and a control mechanism to top management.

Definition:

Performance Budgeting technique is the process of analyzing, identifying, simplifying and crystallizing specific performance objectives of a job to be achieved over a period of the job. The technique is characterized by its specific direction towards the business objectives of the organization. – The National Institute of Bank Management.

The responsibility for preparing the performance budget of each department lies on the respective departmental head. It requires preparation of performance reports. This report compares budget and actual data and shows any existing variances. To facilitate the preparation the departmental head is supplied with the copy of the master budget appropriate to his function.

MASTER BUDGET:

Master budget is a comprehensive plan which is prepared from and summarizes the functional budgets. The master budget embraces both operating decisions and financial decisions. When all budgets are ready, they can finally produce budgeted profit and loss account or income statement and budgeted balance sheet. Such results can be projected monthly, quarterly, half-yearly and at year end. When the budgeted profit falls short of target it may be reviewed and all budgets may be reworked to reach the target or to achieve a revised target approved by the budget committee.

UNIT - V

Capital Budgeting

Major role of the financial management is the selection of the most gainful assortment of capital investment and it is vital area of decision-making for the financial manger because any action taken by the manger in this area affects the working and the success of the firm. Capital budgeting is the planning process used to regulate whether an organization's long term investments such as new machinery, replacement machinery, new plants, new products, and research development projects are worth the funding of cash through the firm's capitalization structure (debt, equity or retained earnings). It is the procedure of allotting resources for major capital, or investment, expenditures (Sullivan, 2005). It is also stated by financial scholars that capital budgeting is the decision making process by which a firm appraises the purchase of major fixed assets including building, machinery and equipment.

Goals of Capital Budgeting

Prime goals of capital budgeting investments is to upturn the value of the firm to the shareholders. It has also an objective to rank projects and raise funds. Basically, the purpose of budgeting is to provide a forecast of revenues and expenditures and construct a model of how business might perform financially. It means to construct a model of how a business might perform financially if certain strategies, events, and plans are carried out. It empowers the actual financial operation of the business to be measured against the forecast, and it establishes the cost constraint for a project, program, or operation. Budgeting helps to aid the planning of actual operations by forcing managers to consider how the conditions might change, and what steps should be taken in such an event. It encourages managers to consider problems before they arise. It also helps co-ordinate the activities of the organization by compelling managers to examine relationships between their own operation and those of other departments.

Important objectives of capital budgeting:

1. To ensure the selection of the possible profitable capital projects.
2. To guarantee the effective control of capital expenditure in order to achieve by forecasting the long-term financial requirements.
3. To make estimation of capital expenditure during the budget period and to see that the benefits and costs may be measured in terms of cash flow.

4. Determining the required quantum takes place as per authorization and sanctions.
5. To expedite co-ordination of inter-departmental project funds among the competing capital projects.
6. To guarantee maximization of profit by allocating the available investible.

Other vital functions of a budget include:

1. To control resources.
2. To communicate plans to various responsibility centre managers.
3. To motivate managers to strive to achieve budget goals.
4. To evaluate the performance of managers.
5. To provide visibility into the company's performance.

Principles of Capital Budgeting Decisions:A decision regarding investment or a capital budgeting decision involves the following principles:

1. A careful approximation of the amount to be invested.
2. Original search for profitable opportunities.
3. A careful estimates of revenues to be earned and costs to be incurred in future in respect of the project under consideration.
4. A listing and consideration of non-monetary factors influencing the decisions.
5. Evaluation of various proposals in order of priority having regard to the amount available for investment.
6. Proposals should be controlled in order to avoid costly delays and cost over-runs.
7. Evaluation of actual results achieved against those budget.
8. Care should be taken to think all the implication of long range capital investment and working capital requirements.
9. It should identify the fact that greater benefits are preferable to smaller ones and early benefits are preferable to latter benefits.

The necessity of capital budgeting can be highlighted taking into consideration the nature of the capital expenditure such as heavy investment in capital projects, long-term implications for the firm, irretrievable decisions and complicates of the decision making. Its importance can be judged on the following other grounds:

1. Indirect Forecast of Sales: The investment in fixed assets is associated with future sales of the firm during the life time of the assets purchased. It demonstrates the possibility of expanding the production facilities to cover extra sales shown in the sales budget. Any failure to make the sales prediction would result in over investment or under investment in fixed assets and any inaccurate forecast of asset needs may lead the firm to serious financial results.
2. Comparative Study of Alternative Projects: Capital budgeting makes a comparative study of the alternative projects for the replacement of assets which are wearing out or are in danger of becoming outdated so as to make the best possible investment in the replacement of assets. For this purpose, the success of each projects is appraised.
3. Timing of Assets-Acquisition: It is emphasized by financial experts that appropriate capital budgeting leads to proper timing of assets-acquisition and improvement in quality of assets purchased. It is due to nature of demand and supply of capital goods. The demand of capital goods does not arise until sales impinge on productive capacity and such situation occur only intermittently. Alternatively, supply of capital goods with their availability is one of the functions of capital budgeting.
4. Cash Forecast: Capital investment requires substantial funds which can only be organised by making determined efforts to guarantee their availability at the right time. Thus it helps cash forecast.
5. Worth-Maximization of Shareholders: The impact of long-term capital investment decisions is far reaching. It safeguards the interests of the shareholders and of the enterprise because it avoids over-investment and under-investment in fixed assets. Through selection of lucrative projects, the management accelerates the wealth maximization of equity share-holders.
6. Other Factors: The following other factors can also be considered for its importance:

   a. It helps in formulating a sound depreciation and assets replacement strategy.
   b. It may be beneficial in considering methods of coast reduction. A reduction campaign may necessitate the consideration of purchasing most up-to-date and modern equipment.
   c. The practicability of replacing manual work by machinery may be seen from the capital forecast be comparing the manual cost and the capital cost.
   d. The capital cost to enhance working conditions or safety can be obtained through capital expenditure estimating.

e. It enables the management to develop the long-term plans and assists in the formulation of general strategy.
f. It assesses the impact of capital investment on the revenue expenditure of the firm such as depreciation, insure and there fixed assets.

Basically, the firm may be challenged with three types of capital budgeting decisions:

1. Accept-Reject Decision: This is a major decision in capital budgeting. If the project is accepted, the firm would invest in it. If the proposal is rejected, the firm does not invest in it. In general, all those proposals which produce a rate of return greater than a certain required rate of return or cost of capital are accepted and the rest are rejected. Through this criterion, all independent projects are accepted. Independent projects are the projects that do not compete with one another in such a way that the acceptance of one precludes the possibility of acceptance of another. Under the accept-reject decision, all independent projects that satiate the minimum investment standard, should be executed.
2. Mutually Exclusive Project Decision: Mutually Exclusive Project Decision usually compete with other projects in such a way that the approval of one will reject the acceptance of the other projects. The alternatives are mutually exclusive and only one may be chosen. For example, firm is intending to buy a new folding machine. There are three competing brands, each with a different initial investment and operating costs. The three machines denote mutually exclusive alternatives, as only one of these can be selected. Furthermore, the mutually exclusive project decisions are not independent of the accept-reject decisions. The project should also be acceptable under the latter decision. Thus, mutually exclusive projects get significance when more than one tender is acceptable under the accept-reject decision.
3. Capital Rationing Decision: Capital Rationing Decision is applicable when in a situation where the firm has unlimited funds, all independent investment proposals yielding returns greater than some pre-determined level are accepted. Nevertheless, this situation does not succeed in most of the business forms in actual practice. They have a fixed capital budget. A large number of investment proposals compete for these limited funds. The firm must, therefore, share them. The firm assigns funds to projects in a manner that it maximises long-run returns. Therefore, capital rationing denotes to a situation in which a firm has more acceptable investments than it can

finance. It is related with the selection of a group of Investment proposals out of many investment proposals acceptable under the accept-reject decision. Capital rationing utilizes ranking of acceptable Investment projects. These projects can be ranked on the basis of a pre-determined principle such as the rate of return. The projects are ranked in downward order of the rate of return.

Components of Capital Budgeting

1. Initial Investment Outlay: It comprises of the cash necessary to obtain the new equipment or build the new plant less any net cash proceeds from the disposal of the replaced equipment. The initial outlay also includes any additional working capital related to the new equipment. Only changes that occur at the launch of the project are included as part of the initial investment outlay. Any additional working capital required or no longer needed in future period is accounted for as a cash outflow or cash inflow during that period. Net Cash benefits or savings from the operations: This component is calculated as under. (The incremental change in operating revenues minus the incremental change in the operating cost = Incremental net revenue) minus (taxes) plus or minus (changes in the working capital and other adjustments). Terminal Cash flow: It consist of the net cash generated from the sale of the assets, tax effects from the termination of the asset and the release of net working capital. The Net Present Value technique: The Net Present Value technique is common among all techniques used. Under this method, a project with a positive NPV suggests that it is worth investing in.

Phases of Capital Budgeting

There are many phases of capital budgeting. Phases of capital budgeting:

Planning: The planning phase encompasses investment strategy and the generation and preliminary screening of project proposals. The investment strategy offers the framework that shapes, guides and demarcates the identification of individual project opportunities.

1. Analysis: If the preliminary screening proposes that the project is worth investing, a detailed analysis of the marketing, technical, financial, economic, and ecological aspects is conducted.

2. Selection: The selection process addresses the matter whether the project worth investing. Several appraisal criteria has been advised to judge the value of a project. There are two general categories.

   i. Non-Discounting criteria.
   ii. Discounting criteria.

Some selection rules for both methods are as follows:

Non-discounting Criteria	**Accept**	**Reject**
Payback Period (PBP)	**PBP < Target period**	**PBP > Target period**
Accounting Rate of Return (ARR)	**ARR > Target Rate**	**ARR < Target Rate**

Non-discounting Criteria	**Accept**	**Reject**
Net Present Value (NPV)	**NPV > 0**	**NPV < 0**
Internal Rate of Return (IRR)	**IRR > Cost of capital**	**IRR < Cost of capital**
Benefit- Cost Ratio (BCR)	**BCR > 1**	**BCR < 1**

4. Financing: After choosing a project, proper financing must be made. Equity and debt are two major sources of Finance for a project. Flexibility, risk, income, control and taxes are the vital business considerations that influence the capital structure decision and the choice of specific instruments of Financing.

5. Implementation: The implementation phase for an industrial project, which involves the establishing manufacturing facilities has several stages:

I. Project and engineering designs

II. Negotiations and contracting

III. Construction

IV. Training

V. Plant commissioning

6. Review: Once the project is commissioned, a review phase has to be done. Performance review should be done occasionally to compare the actual performance with the projected performance. In this stage, feedback is beneficial in several ways:

I. It focuses on realistic assumptions.

II. It provides experience, which will be valuable in future decision making.

III. It recommends corrective action.

IV. It supports to uncover judgmental biases.

V. It promotes the need for caution among project sponsors.

Techniques of Evaluating Capital Investment Proposals

There are numerous appraisal methods which may be suggested to assess the capital investment proposals. Most widely accepted methods are grouped into the following categories:

I. Traditional Methods:

Traditional methods are further divided into the following:

(1) Pay-back period method or Pay-out method.

(2) Improvement of Traditional Approach to Pay-back Period Method.

(a) Post Pay-back profitability Method.

(b) Discounted Pay-back Period Method.

(c) Reciprocal Pay-back Period Method.

(3) Rate of Return Method or Accounting Rate of Return Method.

II. Time Adjusted Method or Discounted Cash Flow Method

Time Adjusted Method further classified into:

i. Net Present Value Method.

ii. Internal Rate of Return Method.

iii. Profitability Index Method.

Levels of Decision Making

Capital budgeting decisions are categorized into these three decision levels.

1. Operating capital budgeting: This may comprises of routine minor expenditures, such as expenditure on office equipment. The lower or the middle level management can manage the operating capital budgeting decisions.

2. Administrative capital budgeting: This involves medium-size investments such as expenditure on expansion of existing line of business. Administrative capital budgeting decisions are semi-structured in nature, and they may also involve some alternatives, such as option to delay. Usually, the senior management is allocated the responsibility of handling these decisions.
3. Strategic capital budgeting: This involves huge investments such as procurement of a new business or development in a new business. Strategic investments are exclusive and unstructured and involve simple or complex options, and they cast a significant influence on the direction and value of the business. Senior management team usually tackle such investments. Keeping the view the different decision making levels, capital expenditures could be categorized in a way, which would reflect the appropriate managerial efforts to be placed in planning and controlling them

Level of decision making:

	Operating Decision	**Administrative Decision**	**Strategic Decision**
Where is the decision taken?	Lower level management	Middle level management	Top level management
How structured is the decision	Routine	Semi-structured	Unstructured
How is the level of resource commitment	Minor resource commitment	Moderate resource commitment	Major resource commitment
What is the time horizon	Short term	Medium term	Long term

To summarize, Capital budgeting is described as the total process of generating, evaluating, selecting and following up on capital expenditure alternatives. The firm allocates or budgets financial resources to new Investment proposals. Normally, Capital budgeting is the procedure by which the financial manager chooses whether to invest in specific capital projects or assets. In some circumstances, the process may entail in acquiring assets that are completely new to the firm. In other situations, it may mean replacing an existing outdated asset to maintain adeptness.