SYLLABUS

Class – B.Com. III Year

Subject – Management Accounting

UNIT-I	Management accounting: meaning, nature, scope and functions of management accounting, role of management accounting in decision making, management accounting vs. financial accounting and cost accounting. Tools and techniques of management accounting.
UNIT-II	Financial statement: meaning, limitations of financial statements, objectives and methods of financial statements analysis, ratio analysis, classification of ratios – profitability ratios, turnover ratios and financial ratios, advantages of ratio analysis, limitations of accounting ratios.
UNIT-III	[illegible]
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UNIT-I

BASIC OF MANAGEMENT ACCOUNTING

What is Management Accounting?

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

Management accounting thus is the process of

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

Management accounting is used by management to :

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

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

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

NATURE OR CHARACTERISTICS OF MANAGEMENT ACCOUNTING

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

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

On the other hand, subjective judgment of management and various needs of the organization are also taken into account while taking decisions and on this basis it is an art. On the whole, management accounting is both- a science as well as an art.

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

Objectives of Management Accounting

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

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

plans before than management for comparative study. The performance of various departments is also communicated regularly to the also communicated regularly to the top management.

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

SCOPE OF MANAGEMENT ACCOUNTING :

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

(i) **Financial Accounting :** Financial accounting provides the data base on the basis of which management accounting processes information to management to serve their needs. Proper designed financial accounting system forms the very base on which management accounting prepares relevant and analytical report to facilitate management decision making. Management accounting assembles and presents the financial accounting data in meaningful terms for resolution of managerial issues. Hence, without the back up by Financial Accounting feeding system, management accounting functions are not possible.

(ii) **Cost Accounting :** Cost accounting provides the most sophisticated techniques of Marginal Costing, Budgetary Control, Standard Costing, Inter firm comparison which enables Management Accounting to provide necessary information for effective decision making and control. Costing accounting helps in performance appraisal and formulation of pricing policies with costing information. It is in fact the integral arm of management without the support system of costing accounting, the inefficiencies in various operations can not be highlighted to management.

(iii) **Tools and Techniques of Management control :** Management accounting makes an detailed analysis and interpretation of financial statements through the tools of comparative statements, trend ratios, ratio analysis and fund flow statement. Accounting Ratios help in the evaluation of operating performance and in judging the liquidity and solvency of the enterprise. Fund flow statement focuses on the management of funds in the operations of the business variance analysis aims at controlling the various elements of costs, reporting the adverse variation for management action.

(iv) **Statistical and Quantitative Techniques :** A number of statistical tools and technique is like linear programming, regression analysis facilitates in providing information in a meaningful manner for effective control and decision making. Hence management accounting also includes these techniques in its scope.

(v) **Inflation Accounting :** This is also referred as revaluation accounting which is concerned in maintaining capital in real terms and accordingly profit is calculated. This involves the exercise of revaluing the assets at current prices and shows the increase/decrease in the value of capital. On the assumption that the monetary unit value is unstable; the impact on capital is ascertained as a result of changes in value of money. This is therefore another technique which falls within the orbit of management accounting.

(vi) **Tax Accounting** : Tax planning is another important area which has a serious impact on the profitability of the concern. Without proper planning of tax, the profits of the enterprise are hijacked which affects adversely the business operations. Hence, it an important activity of management accounting.

(vii) **Management Reporting :** Management report forms the integral aspect of management accounting system. They identify the areas where management attention is desired for corrective action. Decision making is facilitated based on the information provided by the report. The reports should portray all the relevant aspects concerning the operative efficiency of the business. Report have to be well designed and frequent to help the management. This is an essential part of management accounting.

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FUNCTIONS OF MANAGEMENT ACCOUNTING :

The basic functions of management accounting is to furnish relevant information along with analytical data to the management to enable timely decisions for appropriate actions. It helps in the effective discharge of management functions of planning, organizing, directing and controlling. The following are the main functions of management accounting.

(a) **Furnishing of relevant and vital data :** Relevant and vital data is collected from concerned sources and presented through meaningful reports to management which facilitates decision making. Accounting data provides a strong base for furnishing financial figures to management to enable appropriate and timely action.

(b) **Compilation of data in suitable form :** Accounting data as it is may not serve a meaningful and useful purpose to management for decision making. This data is required to be suitably modified and amended in manner that suits the management purpose. Hence the data is classified and rearranged in a way that helps the management to gain insight into the situation.

(c) **Analysis and Interpretation :** Management accounting provides the tools and techniques for analysis and interpretation of data. Information is furnished in a comparable and analytical manner for easy grasp of the situation. This facilitates planning and decision making.

(d) **Means of communication and reporting :** Management accounting system constitutes an important segment of the management communication system providing information and guidance for prospective planning and control. Reports well prepared sand presented makes the management more effective in controlling business operations. It helps in co-coordinating the operations of various department.

(e) **Facilitates control function :** Management accounting helps in control function through the techniques of budgeting control and standard costing. These techniques enable comparison of actual performance with the targets and standards set analysis of the deviations from such standards taking corrective action as a result of analysis and follow up to appraise the effectiveness of corrective action.

(f) **Planning :** Planning involves determination of different courses of actions based on the purpose facts and considered estimates. It helps in planning the strategy to be adopted in achieving the targets. It renders necessary help in planning for future the business goals and objectives.

(g) **Guides the management in judgment:** It assists the management in forming its judgment about the financial condition or the profitability of the business operation. Suitable action can be taken in laying down future plans and policies for improvement and advancement.

(h) **Decision – making :** Decision making is a management process of making right choices from amongst the various courses of action. Decision can be taken only when the data is assembled and presented in meaningful terms and the areas requiring management attention are highlighted. Management accounting makes this decision making more effective.

1. Reporting is usually at the end of the year; when the events have already taken place for which nothing can be done.
2. Financial accounting offers a macro view of the entire activities of the organization; it shows the results of the business as a whole without showing the results of the individual departments or products. Hence there is a fusion of all positive and negative results culminating into one result.
3. Financial accounting is subject to statutory audit which is compulsory as per the provisions of the Companies Act, 1956. Management Accounting is not subject to any such statutory audit.
4. Financial accounting considers only the monetary aspect. Management accounting considers both the monetary as well as non monetary aspects.

ROLE OR IMPORTANCE OR SIGNIFICANCE OF MANAGEMENT ACCOUNTING
OR
MANAGEMENT ACCOUNTING AS A TOOL OF MANAGEMENT

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

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

LIMITATIONS OF MANAGEMENT ACCOUNTING:

Management accounting is not free from limitations limits its effectiveness :

1. **Data Base** : Management accounting depends for data on the financial and cost records. If the financial and cost accounting contains incorrect and inaccurate information; management accounting also gets affected to that extent. Discrepancies of financial and cost accounting penetrates into the management accounting system giving unreliable results. Therefore, effectiveness of management accounting system depends upon the efficiency of system followed for recording and compiling financial and cost records.
2. **Intuitive Decision making** : Many times management is prone to take decisions without reference to information provided by management accounting system. They are tempted to take decision in an easy and short cut manner rather than on scientific basis. They may base their decision on mere guess work and ignore the information provided by management accounting system.

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3. **Absence of Objectivity** : Management accounting provides both qualitative and quantitative information which offers scope for subjective element. The report are therefore influenced by opinion judgment based on personal bias and prejudice. These make the reports more subjective rather than objective.
4. **Developing discipline** : Management accounting is still a new and developing. It has yet to sharpen its tools and techniques and seek perfection in its application. As a evolving discipline it is subject to certain obstacles and impediments which are to be cleared before it emerges as a fully developed science.
5. **Expensive proposition** : It is an expensive proposition to install the system with necessary facilities and highly skilled persons. Therefore, small concerns cannot afford to adopt it. Only large concerns can taken advantage of it; where the benefits outweigh the cost in many ways.
6. **Wide scope** : Management accounting embraces many disciplines and its scope is very wide. Hence it requires a through knowledge and understanding of many subjects to make the data more meaningful and informative. This makes the task of management accounting difficult.
7. **Resistance** : This subject demands a change in the method and style of working which may meet opposition and non co-operation from certain vested interests. If may be construed by some persons as tool for their exploitation. They dislike being guided in decision making through scientific approach. Proper education of the system is necessary to help them break away from the traditional style of working.
8. **Can not replace Management**: Management accounting with all its tools and techniques can only facilitate decision making process for the management. It cannot be treated as an alternative or substitute for management. Ultimately it depends on the management for execution. Therefore, it is only a tool in the hands of management and cannot replace management. Management accounting processes quantitative data and collaborates with qualitative data. Only qualitative and unquantified data cannot be easily processed by management accounting.

TOOLS AND TECHNIQUES OF MANAGEMENT ACCOUNTING

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

1. **Financial Policy and Accounting –** every concern has to take a decision about the sources of raising funds. The funds can be raised either through the issue of share capital or through the raising of loans. Capital or preference share capital. The second decision concerns the raising of the loans. Whether the loans should be long-term or short-term is again a matter of policy. The proportion between share capital and loans should also be decided.
2. **Analysis of Financial Statements-** The analysis of financial statement is meant to classify and present the data in such a way that it becomes useful for the management. The meaning and significance of the data is explained in it in non-technical language. The techniques of financial analysis include comparative financial statements, ratios, funds flow statement, trend analysis etc.
3. **Historical Cost Accounting-** The system of recording actual cost data on or after the date when it has been incurred is known as historical cost accounting. The actual cost is compared to the standard cost and it gives an idea about the performance of the concern.
4. **Budgetary Control-** It is a system which uses budgets as a tool for planning and control. The budgets of all functional departments are prepared in advance. The actual performance is recorded and compared with the pre-determined targets. The timing of budgets and finding out deviations is an important tool for planning and controlling.
5. **Standard Costing-** Standard costing is an important technique for cost control purposes. In standard costing system, costs are determines in advance. The actual costs are recorded and compared with standards costs. The variances, if any, are analysed and their reasons are ascertained.
6. **Marginal Costing-** This is a method of costing which is concerned with changes in costs resulting from changes in the volume of production. Under this system, cost of product is divided into

marginal (variable) and fixed cost. The latter part of cost (fixed) is taken as fixed and is recorded over a level of production and every additional production unit involves only variable cost.

7. **Decision Accounting-** An important work of management is to take decisions. Decision taking involves a choice from various alternatives. There may be decisions about capital expenditure, whether to make or buy, what price to be charged, expansion or diversification, etc.
8. **Revaluation Accounting-** This is also known as Replacement Accounting. The preservation of capital in the business is the main objective of management. The profits are calculated in such a way that capital is preserved in real terms. During periods of rising prices, the value of capital is greatly affected.
9. **Control Accounting-** Control accounting is not a separate accounting system. Different systems have their control devices and these are used in control accounting. In control accounting we can use internal check, internal audit, statutory audit and other similar methods for control purposes.
10. **Management Information Systems-** With the development of electronic devices for recording and classifying data, reporting to management has considerably improved. The data relevant planning, co-ordination and control is supplied to the management. Feedback of information and responsive can be used as control techniques.

Relationship of management accounting, financial accounting and cost accounting

Management accounting, financial accounting and cost accounting are the methods of accounting providing information about the business firms. The financial accounting is related to the recording of daily transaction whereas in management accounting sources of information are used to specific mean.

Financial accounts have deep impact on management accounting, because it is a branch of financial accounting. Both of these accounting are mutually helper and alternate to each other and are necessary for efficient operation of the firm.

Cost accounting is tool that provides necessary data to the management for planning, decision making and determination of policies. Basically cost accounting and management are supplementary to each other. If in any business there is no room for cost accounting then management accounting will have no identity in that business.

Difference between management accounting and cost accounting

Base	Cost accounting	Management accounting
Object	An object of cost accounting to find out a cost of a product or a service.	An object of m.a. is to make available various information to the management for planning and other activities.
Nature	In cost accounting both past and present data are used.	In the normally data are used for future policies and planning.
Scope	Cost accounting having a narrow scope because mainly it determines the cost.	Its scope is very wide, it includes financial account, cost account report to management etc
Age	Cost accounting is an old method.	Management accounting is a modern concept.
Principles	In this some principles and methods are adopted and from time to time same principles are used.	In this for reporting to management no specific rule or principle is adopted.

Difference between Financial Accounting and Management Accounting

Basis of Difference	Financial Accounting	Management Accounting
1. Objects	Its object is to record various transactions and to know, on that basis, profit or loss during a particular period and financial position at the end of that	It s object is to provide necessary accounting information to management which may help it in taking decisions and formulating policies.

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

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UNIT-II

Financial statements analysis: Meaning, objectives and methods

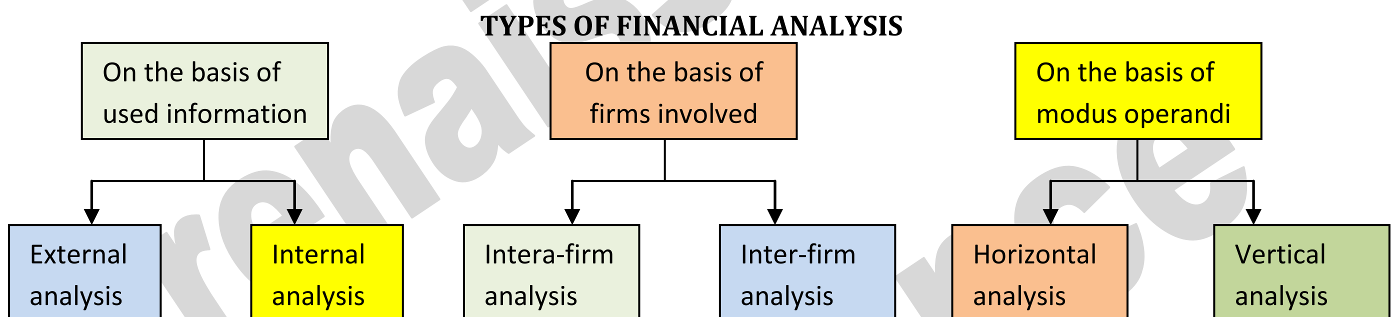
The term' Financial Analysis' Which is also known as 'analysis and interpretation of financial statements refer to process of determining financial strength and weaknesses of the firm by stabilizing relationship between the items of balance sheet, profit & loss a/c and other operative data.
The purpose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

TYPES OF FINANCIAL ANALYSIS

Financial analysis can be classified into different categories depending upon

1. Information used
2. Method of operation followed in analysis or the modes operandi of analysis

TYPES OF FINANCIAL ANALYSIS



TOOLS OR METHODS OF FINANCIAL ANALYSIS

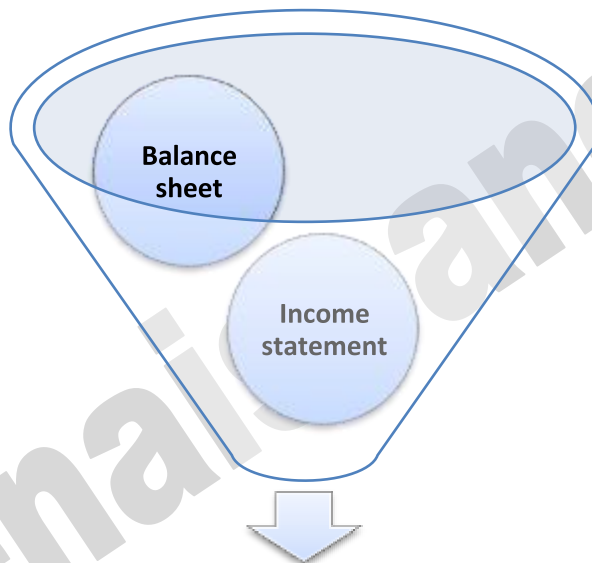
A number of methods are used to study the relationship between different statements
Following are het methods generally used for financial analysis

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

COMPARATIVE FINANCIAL STATEMENTS

The comparative financial statements are the statements of the financial position at different periods of time. The elements of financial position are shown in a comparative form to give an idea of the financial position of two or more periods. Generally two financial statements (balance sheet and income statements) are prepared in comparative form for the purpose of financial analysis.

For example, when figure of sales of previous periods are given along with the figures of current period, the analyst will be able to see the trends of sales over different period of time.



THE COMPARATIVE STATEMENTS ARE-

COMPARATIVE BALANCE SHEET

Comparative balance sheet as on two different dates can be used for comparing assets and liabilities and finding out on increase or decrease in those items.
While interpreting comparative balance sheet, the interpreter is expected to consider the following points.

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

COMPARATIVE INCOME STATEMENT-

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

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

COMMON SIZE STATEMENTS

Common size statements are those in which the figures are converted into percentage on some common basis. The use of these helps in making inter period & inter firm comparison and also in high lighting upon the trends in performance, efficiency & financial position. However any material change

in the techniques procedure & principles would render these statements users & insignificant tool of financial analysis.

a. **Common size balance sheet-** A statement in which balance sheet items are expressed as the percentage of its total.
b. **Common size income statements-** in common size income statement various item of income statements are shown as percentage of sales.

TRENDS ANALYSIS

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

Limitations of financial analysis: financial statement analysis is an important method of determination of financial capabilities and weakness of any firm, but their analysis is based on the information given in the financial statements. Some of the limitations are as follows

1. It is study of interim reports only.
2. Comparison of financial statements of one firm with another is not possible.
3. Validity of financial analysis is reduced when there are price changes.
4. Conclusion drawn from one year financial statements is worthless.
5. Profit and loss account is prepared on the basis of old conventions due to which correct information of net profit is not provided.

Ratio Analysis

Meaning of Ratio : generally ratio means establishment of logical relationship between two or more variable. Thus ratio is a numeric relation between two or more items of financial statement.
Ratio analysis : Ratio analysis is a techniques of analysis and interpretation of financial statements. It is a process of establishing various ratios and their interpretation, to help top management in decision making. Ratio is not an end in itself but it is a means of understand strength and weakness of the firm properly.
Interpretation of the ratio: as the calculations of ratios from the data given in the financial statements is an important function. In the same manner interpretation of these ratios is also the most important function. Calculation of ratio is a clerical work while for interpretation of ratios skill and foresightedness are required. Normally the interpretation of ratios can be made by the following ways.

1. **Single absolute ratio –** Generally it is said that if a person interprets a single ratio.
2. **Group of ratios –** Some of ratios are not important by their own but provides meaning ful conclusion when they are interpreted along with other ratios like study of profit on sale with capital employed or current ratio with liquid ratio.
3. **Historical comparison -** When ratios of various years are compared then this study indicates the direction of the change and shows whether there is a improvement, downfall or constancy in the performance and financial position of the firm.
4. **Project Ratios –** Various ratios may be calculated as a standard from the projected financial statements.
5. **Inter-firm comparison –** inter firm comparison of ratios of any firm with the ratios of other firms or with the average ratios of all the firms.

Classification of Ratios : Various accounting ratios are broadly classified as under –

1. Short term financial position ratios or liquidity ratios.
2. Activity or turnover ratio.
3. Profitability ratios.

4. Long term financial positions or solvency ratios.

Short Term Financial Liquidity Ratios

Current Ratio = A liquidity ratio that measures a company's ability to pay short term obligations.

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

Interpretation – If the current ratio is low it represents that the liquidity position of the firm is not good and the firm is not able to pay its current liabilities immediately.

On the other hand, if the current ratio is very high it indicates idle assets which are not properly utilized. There should be proper balance between these two situations. A current ratio of 2:1 is considered on ideal situation.

Significance – Current Ratio is an index of the firm's financial stability. It provides a margin of safety of the creditors and indicates strength of working capital.

Limitation-

1. It is crude measurement of liquidity because it measures only the quantity and not the quality of current assets.
2. Ratio is computed from the figures of balance sheet which might be manipulated to show a better position of the firm than what is actual.

Quick/Acid Test/Liquid Ratio.

Quick ratio is used as a measure of the company's ability to meet its current obligation.

Quick/Liquid/Acid Test Ratio = $\frac{\text{Liquid Assets}}{\text{Current Liabilities}}$

Liquid Assets = Current Assets – (Stock and prepaid expenses)

Interpretation – A high quick ration is an indication that the firm has the ability to meet its current liabilities in time and on the other hand, a low quick ratio represents that the firms liquidity position is not good.

Quick ratio of 1:1 is considered satisfactory It indicates high solvent positions.

Significance

1. It is the real test of liquidity position.
2. It gives better picture of firms ability to meet its short term obligations.
3. It is used as a supplementary ratio to the current ratio.
4. It is more of a qualitative nature of test.

(iii) Absolute Liquidity Ratio/Super Quick Ratio – Absolute liquid assets include cash in hand, cash at bank readily saleable securities and short term investment because it is assumed that all creditors will not demand their amount at once and mean while cash can be recovered from stock and debtors.

Absolute liquid Ratio = $\frac{\text{Absolute liquide Assets}}{\text{Current Liabilities}}$

(iv) Cash Ratio- This ratio is calculated to know how much cash and bank balance a business is having against its current liabilities. It shows the availability of cash and bank balance.

Current Ratio = $\frac{\text{Cash + Bank}}{\text{Current Liabilities}}$

Solvency Ratio / Capital Structure Ratios:

1. Debt-Equity Ratio – It is also called as external internal equities ratio. It measures claims of outsiders and owners (shareholders) against the firm.
   This is calculated between external equities or external funds and internal equities or share holders funds.
   Debt Equity = $\frac{\text{External equities or debt}}{\text{Internal equitieis or equity}}$ OR
   = Long term borrowings/equity share capital + preference share capital + reserve & surplus – fictitious Assets
   Interpretation – This ratio indicates margin of safety to creditors on its liquidation.
2. Debt to Total Capital Ratio – This ratio shows the relationship between long term debts and total permanent capital of the business.

$$= \frac{\text{Long term Debts}}{\text{Permanent capital (Share holder' fund + Long term Debts}}$$ OR

3. Debt to total Assets – This ratio establish the relationship between total debts to total assets- = $\frac{\text{Total Debotrs}}{\text{Total Assets}}$ OR
4. Property Ratio or equity Ratio- This ratio establishes the relationship between shareholder's funds and total tangible assets of the firms -
$$= \frac{\text{Share holder' funds}}{\text{Total Tangible Assets}}$$
Interpretation:- Higher ratio shows that firm is less dependent on outsiders for working capital. Thus, higher ratio shows strength of the firm.
5. Capital Gearing Ratio :- This ratio is calculated between equity share capital and reserve and surplus of the company with its debentures preference share capital and long term loans.
$$= \frac{\text{Equity capital + Reserve Funds}}{\text{Fixed Rate interest bearingfunds}}$$
Interpretation:- It the calculated ratio is greater than 1, it shows the firm in highly geared because the burden of fixed interest bearing funds/debts is more than owners equity. It is indication of higher risk.
On the other hand, if ratio is less than one, the firm is said to be low geared and the risk is also low.
6. Capital Employed to Net Work Ratio:- Capital employed is the value of the asset that contribute to a company's ability
$$= \frac{\text{Capital Employed}}{\text{Net worth}}$$
7. Reserve to Capital Ratio- Funds or material set aside saved or saved for future use
$$= \frac{\text{Reserves}}{\text{Capital}}$$
8. Fixed Assets Ratio – This ratio show the relationship between long term funds (Shareholder's funds + long term loan) and fixed assets.
$$= \frac{\text{Long term funds (i.e.shareholder funds + Long term Debts}}{\text{Net Fixed Assets}}$$
9. Debtors to Total Funds/Solvency Ratio- This ratio is used for measuring and analyzing long-term solvency of the business.
This ratio explains that if the firm goes into liquidation then amount realized from sale of assets will be sufficient for repayment of all debtor and liabilities or not.
Solvency Ratio = $\frac{\text{Total outisde liabilities}}{\text{Total Assets}}$
Interpretation –
   1. Higher ratio indicates more risk to creditor.
   2. If capital gearing ratio is lower than 1 than it is a high gearing and if higher than 1 there it's low gearing.

B. Coverage Ratios/Income Based

10. Interest coverage/Fixed charges cover/Debtors Service Ratio- This ratio indicates how many times the profit covers the interest. It shows the margin of cover to lenders of the company.
In other words, interest coverage ratio is helpful to test the firm's debt servicing capacity.
$$= \frac{\text{Net profit before interest } \& \text{ } tax}{\text{Fixed interest charges}}$$
11. Dividend Coverage Ratio:- This ratio indicates how many times the profit after tax covers the dividend of preference share holders
$$= \frac{\text{Profit after tax (PAT)}}{\text{Preference Dividend}}$$

Activity Ratios or Turn over Ratios or Current Assets movement or Efficiency Ratios

In any business funds are invested in various assets to earn sale and profit. If the management of assets is better, then amount of sale and profit will be higher. Efficiency ratios measures the efficiency and

effectiveness with which company manages its resources & assets. These are also called turn over ratios, because these ratios indicate the speed with which assets are converted into sale like stock into sale.

1. (a) Inventory /Stock turnover ratio- A firm must have reasonable stock of inventories in comparison to sales. The level of inventory should neither be too high nor too low.

   Inventory/ Stock turn over Ratio $= \frac{\text{cost of goods sold}}{\text{average inventory}}$

   or $= \frac{\text{Net sales}}{\text{average inventory}}$ or $= \frac{\text{Net sales}}{\text{average inventory at selling price}}$

   (b) Inventory Conversion period- It is also important to see average time taken for clearing the stocks.

   $= \frac{365/360}{\text{inventory turn over ratio}}$

   Interpretation

   This ratio measures the velocity of conversion of stock into sales.

   A high inventory turnover indicates efficient management of inventory because if stock are sold speedly lesser amount of money will be involved in inventory.

   A low inventory turnover indicates dull business, accumulation of obsolete stock poor investment in inventories.

2. Debtors/ Receivables turn over or debtors velocity- Generally all the business firms sales goods on credit as well as for cash credit is considered as tool for higher sale. It is expected that business debtors can be converted in cash within the short period, and due this they are included in the current assets.

   $= \frac{\text{Net credit sales}}{\text{average accounts receivables}}$

   It should be noted that

   i. Average account receivable = Average Debtors + Average B/R
   ii. Average Debtors = $\frac{\text{opening debtors} + \text{closing debtors}}{2}$
   iii. Average B/R = $\frac{\text{opening B/R} + \text{closing B/R}}{2}$

Interpretation

Debtors velocity indicates the number of times the debtors are turned over during the year. If the turnover is higher, it shows higher liquidity and efficiency of management. On the other hand low debtors turnover implies poor liquidity and less efficient management.

3. Average collection period or debts collection period- By this ratio a form comes to know that in how many days its receivables will be converted into cash.

   $= \frac{\text{average debtors and B/R}}{\text{net credit sales}} \times 365/12$

4. Creditors turnover ratio or creditors velocity or payable turnover- creditors turnover ratio is similar to creditors turnover ratio is similar to debtors turnover ratio. It indicates the speed with which the payment are made to the creditors.

   $= \frac{\text{net credit purcahse}}{\text{average A/C payables}}$

   It should be noted that

   i. Average accounts payable= Average Creditors + Average bills payable
   ii. Average Creditors = $\frac{\text{opening creditors} + \text{closing creditors}}{2}$
   iii. Average bills payable = $\frac{\text{opening B/P} + \text{closing B/P}}{2}$

5. Average payment period- It indicates the average days which a firm takes to make payment to its creditors.

$= \frac{\text{Average A/cpayable}}{\text{Credit Purcahse}}$ x 365/ 12 Or = $\frac{\text{Months / Days in a year}}{\text{Creditor turnover}}$

Significance

Both the creditors turn over ratio and the average payment period indicates the promptness in making payments to creditors.

Generally, lower the ratio, better the liquidity position of the firm and higher ratio implies less liquidity position of the firm.

6. **Working capital turn over ratio-** Working capital of every firm is directly related with its sales because it increase and decrease with change in current assets & current liabilities

$= \frac{\text{sales}}{\text{2 average working capital}}$

Average working capital = $\frac{\text{opening W/C+closingW /C}}{2}$

If the sale is not given, the figure of COGS can be used

Working capital turnover ratio = $\frac{\text{Sales / cost of sales}}{\text{net working capital}}$

7. **Fixed Assets Turnover Ratio-** This ratio measure the efficiency as well as profit earning capacity of the firm

$= \frac{\text{sales}}{\text{net fixed assets}}$

Net fixed assets = value of assets – depreciation

Some Important Terminologies

1. Miscellaneous expenses.

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

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

2. Current Assets

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

3. Liquid Assets

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

Liquid Assets = Current Assets – Stock – Prepaid Expenses

4. Absolute Liquid Assets

Cash + Bank + Marketable Securities

5. Current Liabilities

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

6. Liquid liabilities

Liquid liabilities = Current Liabilities – Bank overdraft

7. Working Capital

Working Capital = Current Assets – Current Liabilities

8. Long term loans / liabilities / Long term Debts

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

9. Total debts/ total liabilities/ external liabilities

Total debts = Current liabilities +long term liabilities

10. Capital employed

Capital Employed =

Share capital + Reserves and Surplus + Secured loans + Unsecured loans – misc. Expenditure

11. Cost of goods sold

COGS = Sales – Gross profit

Or

12. Operating net profit

Operating Net Profit = Gross Profit – Operating expenses

Or

Net profit + non operating expenses – non operating income

13. Average Stock

Average Stock = Opening stock + Closing stock / 2

14. Receivables

Receivables = Debtors + Bills receivables

15. Payables

Payables = Creditors + Bills payables

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

=

Share capital + Reserve & Surplus – Miscellaneous expenditure

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Accounting ratio is a method to present the information of the financial statements in simplified, systematised & summarized form. Through Ratio analysis we measure the profitability, efficiency & financial soundness of a firm. Ratio analysis is a "study of relationship among the various financial factors in a business"

Types of Ratios

Profitability ratios

1. Gross Profit ratio = Gross Profit / Sales x 100
2. Net Profit ratio = Gross Profit / Sales x 100
3. Operating NP ratio = Operating Net Profit / Sales x 100
4. Operating Ratio = COGS + Operating Expenses / Sales x 100
5. Expenses ratio = Expenses / Sales x 100
6. Ret. On Prop.'s Fund = NP After Interest & Tax / Proprietor's Fund x 100
7. Ret. on Capital Employed = NP before interest & Tax / Net Capital Employed x 100

Activity / performance / turnover ratios

1. Stock Turn over Ratio = cost of goods sold / average stock
2. Working capital turnover ratio: cost of goods sold / Working Capital
3. Fixed assets turnover ratio: cost of goods sold / fixed assets
4. (a) Debtors turnover ratio: Net credit sales / average receivables
   (b) Average collection period: average receivables / net credit sales x365/ 12/52
5. (a) Creditors turnover ratio: Net credit Purchases / average payables
   (b) Average payment period: average payables / net credit Purchases x365/ 12/52

Liquidity ratios

1. Current ratio or Working capital ratio: current assets / current liabilities
2. Liquid ratio/ quick ratio/ acid test ratio: liquid assets / current liabilities
3. Absolute liquid ratio/ super quick ratio: Absolute liquid ratio / liquid liabilities
4. Cash ratio: Cash + Bank / current liabilities

Ratios from the point of view of prospective Investors

1. Earning Per Share (E.P.S.): N.P. after interest tax & Pref. Div. / No. of Equity Shares
2. Dividend per share (D.P.S): Div. paid to equity share holders / No. of equity shares
3. Pay out Ratio = DPS/EPS
4. Earning yield ratio: EPS / MPS x 100
5. Price earning ratio (PE ratio): MPS / EPS
6. Dividend yield ratio = DPS / MPS x 100

Solvency ratios

1. Debts equity ratio
   a. On the basis of total debts:- Debts / equity
   b. On the basis of long term debts: Long term debts / Equity
2. Proprietary's Ratio: Proprietors fund / Total tangible assets
3. Fixed Assets ratio: Fixed Assets / Proprietor's fund + L.T. Liabilities
   Or
   Fixed Assets / Net Worth
4. Solvency Ratio: Total Assets / Total Liabilities
5. Capital Gearing Ratio: Equity share capital +Reserve &surplus / Pref. share capital+ interest bearing finance
6. Debts service ratio OR Interest coverage ratio: Net profit before interest & tax / Fixed interest charges