SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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SCHOOL OF LAW

UNIT – I – Management Accounting – SBA1501

UNIT I

INTRODUCTION

Definition, Meaning, Nature, Scope and Objectives of Management Accounting – Distinction between Financial, Cost and Management Accounting.

MEANING AND DEFINITION

“Management accounting is concerned with accounting information that is useful to management”.

J.Batty defines “ Management accounting is the term used to describe the accounting methods, systems and techniques which, coupled with special knowledge and ability, assist management in its task of maximizing the profits or minimizing losses”.

“Management accounting is the presentation of accounting information in such as way as to assit management in the creation and in the day-to-day operations of an undertaking” -
I.C.M.A. Institute of Costs and Management Accountants.

According to H.M.Treasury, Management Accounting is “the application of accounting knowledge to the purpose of producing and of interpreting accounting and statistical information designed to assist management in its functions of promoting maximum efficiency and in formulating and co-ordinating future plans and subsequently in measuring their execution”.

NATURE OF MANAGEMENT ACCOUNTING

Though Management Accounting is the latest branch in the accounting arena, it may be regarded partly as a Science and partly as an Art. It is the science of ‘Quantifying and summarising’ and Art of ‘Interpreting’ accounting data.

Management Accounts derives its conclusions through collection, processing and objective analysis of data Quantified in figures. Thus it depends upon “Objectification and Quantification of progress and problems”. From this point of view Management accounting may be regarded as a Science.

However, Management Accounting also involves human judgement, impulses, whims and prejudices as evidenced in interpretation of data, deductions and conclusions drawn from analysis. ‘Subjectivity’ is inevitable in ‘deriving the meaning of data’. Deductions cannot be scientific with precision. Personal judgement of Management accountant may influence the interpretations and deductions significantly. From this point of view, Management Accounting may be regarded as an Art.

(i) Technique of Selective Nature:

Management Accounting is a technique of selective nature. It takes into consideration only that data from the income statement and position state merit which is relevant and useful to the management. Only that information is communicated to the management which is helpful for taking decisions on various aspects of the business.

(ii) Provides Data and not the Decisions:

The management accountant is not taking any decision by provides data which is helpful to the management in decision-making. It can inform but cannot prescribe. It is just like a map which guides the traveler where he will be if he travels in one direction or another. Much depends on the efficiency and wisdom of the management for utilizing the information provided by the management accountant.

(iii) Concerned with Future:

Management accounting unlike the financial accounting deals with the forecast with the future. It helps in planning the future because decisions are always taken for the future course of action.

(iv) Analysis of Different Variables:

Management accounting helps in analysing the reasons as to why the profit or loss is more or less as compared to the past period. Moreover, it tries to analyse the effect of different variables on the profits and profitability of the concern.

(v) No Set Formats for Information:

Management accounting will not provide information in a prescribed proforma like that of financial accounting. It provides the information to the management in the form which may be more useful to the management in taking various decisions on the various aspects of the business.

SCOPE OF MANAGEMENT ACCOUNTING

- **Financial Accounting**

Financial accounting is the general accounting, which relates to the recording of business transaction in the books of prime entry, posting them into respective ledger accounts, balancing them and preparing trial balance. Then a profit and loss account showing the results of the business and also a balance sheet depicting assets, and liabilities of the business concern are prepared. This in turn forms the basis for analysis and interpretation for furnishing meaningful data to the management, Hence management accounting cannot obtain full control and coordination of operations without a well designed financial accounting system.

- **Cost Accounting**

Cost Accounting is a branch of accounting. It is the process and technique of ascertaining costs. Planning, decision-making and control are the basic, managerial functions. The cost accounting system as standard costing budgetary control, Inventory control and marginal costing etc. for carrying out such functions efficiently.

- **Budgeting and Forecasting**

Budgeting means expressing the plans, policies and goal of the enterprise for a definite period in future. Forecasting, on the other Rand, is a prediction of what will happen as result of a given set of circumstances. Targets are set for different departments and responsibility is fixed for achieving these targets. The comparison of actual performance with budgeted figures will give an idea about the performance of departments.

- **Statistical Methods**

Statistical tools such as graphs, charts, diagrams, pictorial presentation, index numbers etc. makes the information more impressive, comprehensive and intelligible: other tools such as time series, regression analysis, sampling techniques etc. are highly useful for planning and forecasting.

- **Inventory control**

It includes control over inventory from the time it is acquired till its final disposal. Inventory control is significant as it involves large sums. The management should determine different levels of stocks - Minimum stock level, maximum stock level, and reordering stock level, for an inventory control, the study of inventory control will be helpful for taking managerial decisions.

- **Interpretation of Data**

Analysis and interpretation of financial statements, are important parts of management accounting. Financial statements may be studies in comparison of statements of earlier periods or in comparison with the statements of similar other firms. After analyzing, the interpretation is made and the reports drawn from this analysis are presented to the management in a simple language.

- **Internal Audit**

It needs devising a system of internal control by establishing internal audit coverage for Internal audit helps the management in fixing responsibility of different individuals.

- **Tax Accounting**

It includes preparation of income statement, assessing the effect of tax on capital expenditure proposals and pricing.

- **Methods and Procedures**

They deal with organization with methods for cost reduction, procedures for improving the efficiency of accounting and office operations.

- **Office Services**

They cover a wide range of activities like data processing, filing, copying, printing, communication, etc.

OBJECTIVES / FUNCTIONS / PURPOSES / ROLE OF MANAGEMENT ACCOUNTING

- **Helps in Planning and Policy formulation**

Planning is one of the primary functions of management, it involves forecasting on the basis of available information, setting goals, framing policies, determining alternative courses of action and deciding on the programme of activities to be taken. Management can help greatly in these processes. Management accounting facilitates for the preparation of statements in the light of past results land gives estimation for the future.

- **Helps in the interpretation process**

The main object of management accounting is to present financial information to the management. The management accounting presents accounting information in an intelligible manner and explains with the help of statistical devices like charts, diagrams graphs, index numbers etc.

- **Helps in Decision-making**

Management accounting makes decision-making process as more modern an scientific by providing significant information relating to various alternatives in terms of cost and revenue. With the help of techniques provided by management accounting, 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.

- **Helps in Controlling performance**

Management accounting techniques, like standard costing and budgetary control are helpful in controlling performance. These techniques are helpful in seeking pre-determined standards and budgets whereby actual performance is compared to detect deviations. Such deviations are further analysed to prevent recurrence of negative deviations and appreciation and maintenance of positive or favourable deviations.

- **Helps in Coordination operations**

Management accounting- helps in overall control. and coordination of business operations, It provides tools which are helpful' in coordinating the activities of different sections or departments. (Ex.Budgets are important means of coordination).

- **Helps in organizing**

Return on capital employed is one of the tools of management accounting. Since management accounting stress more on budget centers, investment centers, cost centers and profit centers, with a view to control costs and responsibilities, it also contributes to principles of decentralization to a greater extent. All these aspects are helpful in setting up effective and efficient organization framework.

- **Helps in Expansion, Diversification and Strategic business problems**

Situations like new project or project for expanding or diversifying the current business, management accounting helps in decision making by providing data to the management and recommendations as to which alternative will be suitable. For such decisions, management accountant takes the helps of techniques like marginal costing and capital budgeting.

- **Helps in Communication of Management policies**

Management accounting conveys the policies of the management downward to the personnel effectively for proper implementation.

- **Helps in Motivating employees**

Through the techniques of standard costing and budgetary control, targets are fixed department-wise, which in turn make the employees conscious of the targets. Achieving the targets leads to satisfaction and greater motivation of employees and overall improvement in efficiency and enhancement of profitability.

- **Helps in Reporting**

One of the primary objectives of management accounting is to keep the management fully informed about efficiency and effectiveness of management policies in practice. This is helpful to the management in reviewing the policies and making improvements.

IMPORTANCE OF MANAGEMENT ACCOUNTING

1. It helps to increase the efficiency of all functions of management.
2. It helps in target-fixing, decision-making, price-fixing, selection of product-mix and so on.
3. Forecasting and Budgeting help the concern to plan the future and financial activities.
4. Various tools and techniques provide reliability and authenticity to carry out the business functions.
5. Different techniques of management accounting help in effective control of business operations.
6. It is proactive-analyses the governmental policies and socio-economic scenario which helps to assess the external environmental impacts on the organization.
7. It creates harmony in the relationship between the management and employees. It enables the management to improve its services to its customers.
8. The management aims to control the cost for production and at the same time increase the efficiency of employees. When cost of production is reduced, it will increase the profit.
9. Unacceptable standards or sub-standards, which are often responsible for unhealthy and bad relations between management and employees, can be removed by the use of management accounting.
10. The use of management accounting may control or even eliminate various types of wastages, production defectives etc.
11. Management accounting helps in communicating up to date information to various parties interested in successful working of the business organization.

1.3 LIMITATIONS OF MANAGEMENT ACCOUNTING

1. It is concerned with financial and cost accounting. If these records are not reliable, it will affect the effectiveness of management accounting.
2. Decisions taken by the management accountant may or may not be executed by the management.
3. It is very expensive. Only big concerns can adopt this method of accounting.
4. New rules and regulations are to be framed, hence there is a possibility of opposition from the employees.
5. It is only in the developing stage.
6. It is a tool to the management and not an alternative of management.

DIFFERENCES BETWEEN MANAGEMENT ACCOUNTING AND FINANCIAL ACCOUNTING

- **Objective**

The main objective of financial accounting is to supply information in the form profit and loss account and balance sheet to outsiders like shareholders, creditors, government etc. But the objective of management accounting is to provide information for internal use of management.

- **Performance Analysis**

Financial accounting is concerned with the overall performance of the business. On the other hand management accounting is concerned with the departments or divisions. It reports about the performance and profitability of each them.

- **Data Used**

Financial accounting is mainly concerned with the recording of past events whereas management accounting is concerned with future plans and policies.

- **Accuracy**

Accuracy is an important factor in financial accounting. But approximations are widely used in management accounting. This is because most of the information is related to the future and intended for internal use.

- **Legal compulsion**

Financial accounting is compulsory for all joint stock companies but management account is only optional

- **Control**

Financial accounting will not reveal whether plans are properly implemented. Management accounting will reveal the deviations of actual performance from plans. It will also indicate the causes for such deviation.

- **Flexibility**

In financial accounting, attempts are being made to prepare accounts in accordance with the standards fixed by and or suitable for external parties. On the other hand, management accounting considers the standards fixed by management itself.

- **Coverage**

Financial accounting covers entire range of business activity while management accounting considers only parts of activity, which relevant to management for decision-making.

- **Publication and Audit**

Financial statements like profit and loss account and balance sheet are published for the use of general public also. They are audited by practicing chartered accountants while there is no provision in management accounting All the reports, statements and forecasts made by management accounting are for the internal use of management only.

- **Principles**

Financial accountings are governed by the generally accepted principles and convention. No such set of principles are followed in management accounting.

DIFFERENCES BETWEEN MANAGEMENT ACCOUNTING AND COSTING ACCOUNTING

- **Objective**

The objective of cost accounting is the ascertainment and control of costs of products or services. But the objective of management accounting is to provide information to management for effiently performing the functions of planning, directing and controlling.

- **Scope**

Cost accounting is concerned with cost ascertainment and control whereas management accounting includes financial accounting, cost accounting, budgeting, tax planning and reporting to management and interpretation of financial data.

- **Data Used**

Cost accounting uses only transactions which can be expressed in figures are taken whereas management uses both qualitative and quantitative information.

- **Nature**

Cost accounting uses both past and present data whereas management accounting deals with future projections on the basis of past and present cost data.

- **Principles and Procedures**

Established procedures and practices are followed in cost accounting. No such prescribed practices are followed in management accounting. The analysis is made and the resulting conclusions are presented in reports as per the requirements of the management.

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UNIT II

ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS

Balance sheet, Profit and loss account, functions of financial statements, meaning, objectives and importance and limitations of financial statements, Techniques of analysis- Comparative, Common size and Trend Analysis - Ratio Analysis - Classification of ratios - profitability ratios - liquidity ratios - solvency ratios - Activity ratios leverage ratios -Interpretation of Financial Statements with the above ratios.

FINANCIAL STATEMENT

MEANING

Financial Statements are the collective name given to Income Statement and Positional Statement of an enterprise which show the financial position of business concern in an organized manner. We know that all business transactions are first recorded in the books of original entries and thereafter posted to relevant ledger accounts. For checking the arithmetical accuracy of books of accounts, a Trial Balance is prepared.

Trial balance is a statement prepared as a first step before preparing financial statements of an enterprise which record all debit balances in the debit column and all credit balances in credit column. To find out the profit earned or loss sustained by the firm during a given period of time and its financial position at a given point of time is one of the purposes of accounting. For achieving this objective, financial statements are prepared by the business enterprise, which include income statement and positional statement.

These two basic financial statements viz:

(i) Income Statement, i.e., Trading and Profit & Loss Account and

(ii) Positional Statement, i.e., Balance Sheet portrays the operational efficiency and solvency of any business enterprise.

The income statement shows the net result of the business operations during an accounting period and positional statement, a statement of assets and liabilities, shows the final position of the business enterprise on a particular date and time. So, we can also say that the last step of the accounting cycle is the preparation of financial statements.

Income statement is another term used for Trading and Profit & Loss Account. It determines the profit earned or loss sustained by the business enterprise during a period of time. In large business organization, usually one account i.e., Trading and Profit & Loss Account is prepared for knowing gross profit, operating profit and net profit.

On the other hand, in small size organizations, this account is divided into two parts i.e. Trading Account and Profit and Loss Account. To know the gross profit, Trading Account is prepared and to find out the operating profit and net profit, Profit and Loss Account is prepared. Positional statement is another term used for Balance Sheet. The position of assets and liabilities of the business at a particular time is determined by Balance Sheet.

OBJECTIVES OF FINANCIAL STATEMENTS

(i) Knowing Profitability of Business:

Financial statements are required to ascertain whether the enterprise is earning adequate profit and to know whether the profits have increased or decreased as compared to the previous year(s), so that corrective steps can be taken well in advance.

(ii) Knowing the Solvency of the Business:

Financial statements help to analyse the position of the business as regards to the capacity of the entity to repay its short as well as long term liabilities.

(iii) Judging the Growth of the Business:

Through comparison of data of two or more years of business entity, we can draw a meaningful conclusion as regard to growth of the business. For example, increase in sales with simultaneous increase in the profits of the business, indicates a healthy sign for the growth of the business.

(iv) Judging Financial Strength of Business:

Financial statements help the entity in determining solvency of the business and help to answer various aspects viz., whether it is capable to purchase assets from its own resources and/or whether the entity can repay its outside liabilities as and when they become due.

(v) Making Comparison and Selection of Appropriate Policy:

To make a comparative study of the profitability of the entity with other entities engaged in the same trade, financial statements help the management to adopt sound business policy by making intra firm comparison.

(vi) Forecasting and Preparing Budgets:

Financial statement provides information regarding the weak-spots of the business so that the management can take corrective measures to remove these short comings. Financial statements help the management to make forecast and prepare budgets.

(vii) Communicating with Different Parties:

Financial statements are prepared by the entities to communicate with different parties about their financial position. Hence, it can be concluded that understanding the basic financial statements is a necessary step towards the successful management of a commercial enterprise.

IMPORTANCE OF FINANCIAL STATEMENTS

The importance of financial statements lies in their utility to satisfy the varied interest of different categories of parties such as management, creditors, public, etc.

1. Importance to Management:

Increase in size and complexities of factors affecting the business operations necessitate a scientific and analytical approach in the management of modern business enterprises.

The management team requires up to date, accurate and systematic financial information for the purposes. Financial statements help the management to understand the position, progress and prospects of business vis-a-vis the industry.

By providing the management with the causes of business results, they enable them to formulate appropriate policies and courses of action for the future. The management communicates only through these financial statements, their performance to various parties and justify their activities and thereby their existence.

A comparative analysis of financial statements reveals the trend in the progress and position of enterprise and enables the management to make suitable changes in the policies to avert unfavorable situations.

2. Importance to the Shareholders:

Management is separated from ownership in the case of companies. Shareholders cannot, directly, take part in the day-to-day activities of business. However, the results of these activities should be reported to shareholders at the annual general body meeting in the form of financial statements.

These statements enable the shareholders to know about the efficiency and effectiveness of the management and also the earning capacity and financial strength of the company.

By analyzing the financial statements, the prospective shareholders could ascertain the profit earning capacity, present position and future prospects of the company and decide about making their investments in this company. Published financial statements are the main source of information for the prospective investors.

3. Importance to Lenders/Creditors:

The financial statements serve as a useful guide for the present and future suppliers and probable lenders of a company.

It is through a critical examination of the financial statements that these groups can come to know about the liquidity, profitability and long-term solvency position of a company. This would help them to decide about their future course of action.

4. Importance to Labour:

Workers are entitled to bonus depending upon the size of profit as disclosed by audited profit and loss account. Thus, P & L a/c becomes greatly important to the workers. In wages negotiations also, the size of profits and profitability achieved are greatly relevant.

5. Importance to the Public:

Business is a social entity. Various groups of society, though directly not connected with business, are interested in knowing the position, progress and prospects of a business enterprise.

They are financial analysts, lawyers, trade associations, trade unions, financial press, research scholars and teachers, etc. It is only through these published financial statements these people can analyze, judge and comment upon business enterprise.

6. Importance to National Economy:

The rise and growth of corporate sector, to a great extent, influence the economic progress of a country. Unscrupulous and fraudulent corporate managements shatter the confidence of the general public in joint stock companies, which is essential for economic progress and retard the economic growth of the country.

Financial Statements come to the rescue of general public by providing information by which they can examine and assess the real worth of the company and avoid being cheated by unscrupulous persons.

The law endeavors to raise the level of business morality by compelling the companies to prepare financial statements in a clear and systematic form and disclose material information.

This has increased the confidence of the public in companies. Financial statements are also essential for the various regulatory bodies such as tax authorities, Registrar of companies, etc. They can judge whether the regulations are being strictly followed and also whether the regulations are producing the desired effect or not, by evaluating the financial statements.

LIMITATIONS OF FINANCIAL STATEMENTS

(i) Manipulation or Window Dressing:

Some business enterprises resort to manipulate the information contained in the financial statements so as to cover up their bad or weak financial position. Thus, the analysis based on such financial statements may be misleading due to window dressing.

(ii) Use of Diverse Procedures:

There may be more than one way of treating a particular item and when two different business enterprises adopt different accounting policies, it becomes very difficult to make a comparison between such enterprises. For example, depreciation can be charged under straight line method or written down value method. However, results provided by comparing the financial statements of such business enterprises would be misleading.

(iii) Qualitative Aspect Ignored:

The financial statements incorporate the information which can be expressed in monetary terms. Thus, they fail to assimilate the transactions which cannot be converted into monetary terms. For example, a conflict between the marketing manager and sales manager cannot be recorded in the books of accounts due to its non-monetary nature, but it will certainly affect the functioning of the activities adversely and consequently, the profits may suffer.

(iv) Historical:

Financial statements are historical in nature as they record past events and facts. Due to continuous changes in the demand of the product, policies of the firm or government etc, analysis based on past information does not serve any useful purpose and gives only postmortem report.

(v) Price Level Changes:

Figures contained in financial statements do not show the effects of changes in the price level, i.e. price index in one year may differ from price index in other years. As a result, misleading picture may be obtained by making a comparison of figures of past year with current year figures.

(vi) Subjectivity & Personal Bias:

Conclusions drawn from the analysis of figures given in financial statements depend upon the personal ability and knowledge of an analyst. For example, the term 'Net profit' may be interpreted by an analyst as net profit before tax, while another analyst may take it as net profit after tax.

(vii) Lack of Regular Data/Information:

Analysis of financial statements of a single year has limited uses. The analysis assumes importance only when compared with financial statements, relating to different years or different firm.

ANALYSIS AMD INTERPRETATION OF FINANCIAL STATEMENTS

Financial statements refer to formal and original statements prepared by a business concern to disclose its financial information. AICPA (American Institute of Certified Public Accountants) says "Financial statements are prepared for the purpose of presenting a periodical review or report on the progress by the management and deals with (i) the status of investment in the business and

(ii) the results achieved during the period under review"

John N.Myer defines "the financial statements provide a summary of the accounts of a business enterprise, the balance sheet reflecting the assets and liabilities and the Income Statement showing the results of operations during a certain period".

According to Kennedy and Muller, "Analysis and interpretation of financial statement are an attempt to determine the significance and meaning of the financial statements data so that forecast may be made of the prospects of future earnings, ability to pay interest, debt maturities, (both current and long term) and profitability of a sound dividend policy".

NATURE OF FINANCIAL STATEMENT

1) **Recorded facts**

   The transactions affecting the business are recorded in the books and shown in the financial statements at the same values. For example, fixed assets are recorded in the books at cost price and shown in the balance sheet at cost price less depreciation. Facts which cannot be recorded in books are not disclosed by the financial statements.

2) **Accounting conventions**

   The financial statements are prepared by following certain accounting conventions and principles. Accounting itself is a dynamic science and accountants have developed from time to time, a number of conventions on the basis of experience.

When accounts are finalized, some conventions are followed: For example, part of a particular expense is charged to profit and loss account (revenue) and the rest may be capitalised. A number of conventions have been developed for valuation of stock, debtors, etc. Therefore, data shown in the financial statements are subject to the validity of conventions used in their preparation.

3) Postulates

Accountants always take some facts as accepted or 'postulates'. Business transactions are recorded on certain assumptions such as 'going concern', 'stable value of rupee', 'profit accrual', etc. These postulates or assumptions are reflected in the financial statements.

4) Personal judgements

Even though a number of conventions and assumptions have been propounded in Accountancy, their use is affected by the personal judgement of accountants. That is why financial statements prepared by two different persons of the same concern give dissimilar results and this is due to different personal judgement in suing or applying particular conventions. Personal judgement of accountants affects the amount kept as reserve for doubtful debts, amount of depreciation on fixed assets, valuation of stock, etc. The financial statements are affected by the personal judgement of accountants and as such they are subjective documents.

OBJECTIVES OF FINANCIAL STATEMENT ANALYSIS

1) To interpret the profitability and efficiency of various business activities with the help of income statement.
2) To aid in important decision making investment and financial decision.
3) To gauge the financial position and financial performance of the concern.
4) To identify areas of mismanagement and potential danger.
5) To ascertain the investment pattern of the resources.
6) To ascertain the maintenance of financial leverage.
7) To determine the pattern of movement of inventory.

8) To determine the diversion of funds, if any
9) To measure utilization of various assets during the period
10) To decide about the future prospects of the firm.
11) To compare operational efficiency of similar concerns engaged the same industry.

TOOLS OR TECHNIQUES OF FINANCIAL STATEMENT ANALYSIS

- Comparative financial statement
- Common size financial statement
- Trend analysis
- Ratio analysis
- Funds flow statement
- Cash flow statement

COMPARITIVE FINANCIAL STATEMENT

Comparative financial statement refer to those statement which summarise and present accounting data for a number of years incorporating therein changes in individual items of financial statements. These statements mainly include a) Comparative balance sheet b) Comparative income statement or profit and loss account.

COMPARITIVE BALANCE SHEET

A comparative balance sheet is a balance sheet which is prepared to ascertain the increase or decrease in proprietors funds, in assets and in liabilities during the course of two years. This balance sheet is highly useful to study the progress of business.

COMPARITIVE PROFIT AND LOSS ACCOUNT

A comparative profit and loss account is a statement which is prepared to find out the increase or decrease in various items of cost, expenses and income over a number of years at least two.

COMMON SIZE FINANCIAL STATEMENT

Common size financial statement refers to the vertical studies single statement for the relationship of the components of the total. It first convert each amount in the statement to the percentage of the total amount of the group of which it is a part. It is also known as "common percentage" or "100 percentage".

TREND ANALYSIS

The term trend refers to any general tendency. Analysis of these general tendencies is called “trend analysis” . the profit and loss account and balance sheet are taken as the base. Every item in the base year financial statements is taken as equivalent to 100. All the corresponding figures in the financial statements of other years are expressed as percentage of their values in the base year’s financial statement. This trend can be computed by dividing each amount in the other financial statements with the corresponding item found in the base financial statements.

RATIO ANALYSIS

It is a technique of calculation of a number of accounting ratios from the date contained in the financial statements, it is used to describe the significant relationship between two or more items of the financial statements connected with each other.

FUNDS FLOW STATEMENTS

If the flow of funds are summarized in the form of statement, it is called funds flow statement. It highlights the underlying financial movements and reflects the changes in the financial position or working capital position at two different dates. It clearly indicates the inflows and outflows of working capital during the specified period. It is mainly prepared to show the application and sources of working capital during the accounting period. It explains how the increase or decrease in working capital has taken place.

CASH FLOW STATEMENT

Cash flow statement is a statement which highlights the inflows and outflows of cash during a specified period. It indicates the sources from which the cash has been generated, uses to which the cash has been put and change in cash balance over the period. It is a statement which portrays the change in the cash position between two accounting period.

The format for all the tools and techniques of Financial Statement Analysis is given below:

FORMAT FOR COMPARATIVE STATEMENTS

- **COMPARITIVE BALANCE SHEET FORMAT**

______________Co. Ltd.

COMPARITIVE BALANCE SHEET AS ON DD/MM/YY & DD/MM/YY

PARTICULARS	**PREVIOUS YEAR**	**CURRENT YEAR**	**INCREASE (+) OR DECREASE (-) IN CURRENT YEAR OVER PREVIOUS YEAR**	
			Amount (Rs.)	**Percentage (%)**
	A	B	C=B-A	D=C/A×100
I. Assets:				
A) Current Assets				
Inventory, Debtors				
Cash and Bank				
Other current assets				
Total CA (A)				
B) Fixed Assets	**xxx**	**xxx**	**xxx**	**xxx**
Land and buildings				
Plant and machinery				
Furniture				
Total FA (B)				
	xxx	**xxx**	**xxx**	**xxx**
Total Assets (A+B)	**xxx**	**xxx**	**xxx**	**xxx**
II. Liabilities & Capital:				
Current Liabilities				
Sundry Creditors				
Bills payable &Tax payable				
Provision for Tax				
Proposed Dividend				
Total CL (A)				
Long-term Liabilities	**xxx**	**xxx**	**xxx**	**xxx**
Debentures & Term Loans				
Total long-term liabilities (B)				
Total liabilities (A+B) = (C)	**xxx**	**xxx**	**xxx**	**xxx**
Capital and Reserves	**xxx**	**xxx**	**xxx**	**xxx**
Equity Share Capital				
Preference Share Capital				
Reserves & Surplus				
Retained Earnings				
General Reserve				
Profit & Loss A/c				
Total Shareholders' fund (D)	**xxx**	**xxx**	**xxx**	**xxx**
Total liabilities & Capital (C+D)	**xxx**	**xxx**	**xxx**	**xxx**

- **COMPARITIVE INCOME STATEMENT**

______________Co. Ltd.

COMPARITIVE INCOME STATEMENT FOR THE YEARS ENDED DD/MM/YY & DD/MM/YY

PARTICULARS	PREVIOUS YEAR	CURRENT YEAR	INCREASE (+) OR DECREASE (-) IN CURRENT YEAR OVER PREVIOUS YEAR	
			AMOUNT (RS.)	PERCENTAGE (%)
	A	B	C=(B-A)	(C/A)×100
Net Sales **Less:** Cost of Goods Sold **Gross Profit (A)**	**xxx**	**xxx**	**xxx**	**xxx**
Operating Expenses: Administration Selling & Distribution **Total Operating Expenses (B)**	**xxx**	**xxx**	**xxx**	**xxx**
Operating profit (A-B) = (C)	**xxx**	**xxx**	**xxx**	**xxx**
Add: Non-operating Income: Interest on investments **Total (D)**	**xxx**	**xxx**	**xxx**	**xxx**
Non-operating Expenses: Interest Income-tax Finance exp Goodwill written off **Total Non-operating Expenses (E)**	**xxx**	**xxx**	**xxx**	**xxx**
Net profit (D-E)	**xxx**	**xxx**	**xxx**	**xxx**

NOTE:

- Fractions if any should be rounded off to the second digit after decimal point

FORMAT FOR COMMON SIZE STATEMENTS

- **COMMON SIZE BALANCE SHEET**

_______________Co. Ltd.

COMMON SIZE BALANCE SHEET AS ON DD/MM/YY & DD/MM/YY

PARTICULARS	PREVIOUS YEAR		CURRENT YEAR	
	AMOUNT (Rs.)	%	AMOUNT (Rs.)	%
I. Assets:				
A) Current Assets				
Inventory				
Debtors				
Cash and Bank				
Other current assets				
Total CA (A)	**xxx**	**xxx**	**xxx**	**xxx**
B) Fixed Assets				
Land and buildings				
Plant and machinery				
Furniture				
Total FA (B)	**xxx**	**xxx**	**xxx**	**xxx**
Total Assets (A+B)	**xxx**	**xxx**	**xxx**	**xxx**
II. Liabilities & Capital:				
Current Liabilities				
Sundry Creditors				
Bills payable				
Tax payable				
Provision for Tax				
Proposed Dividend				
Total CL (A)	**xxx**	**xxx**	**xxx**	**xxx**
Long-term Liabilities				
Debentures				
Term Loans	**xxx**	**xxx**	**xxx**	**xxx**
Total long-term liabilities (B)	**xxx**	**xxx**	**xxx**	**xxx**
Total liabilities (A+B) = (C)				
Capital and Reserves				
Equity Share Capital				
Preference Share Capital				
Reserves & Surplus				
Retained earnings				
General Reserve				
Profit & Loss A/c				
Total Shareholders' fund (D)	**xxx**	**xxx**	**xxx**	**xxx**
Total liabilities & Capital (C+D)	**xxx**	**xxx**	**xxx**	**xxx**

- **COMMON SIZE INCOME STATEMENT**

_______________Co. Ltd.

COMMON SIZE INCOME STATEMENT FOR THE YEARS ENDED DD/MM/YY & DD/MM/YY

	PREVIOUS YEAR		**CURRENT YEAR**	
PARTICULARS	**AMOUNT (₹)**	**%**	**AMOUNT (₹)**	**%**
Net Sales **Less:** Cost of Goods Sold **Gross Profit (A)**	 **xxx**	 **xxx**	 **xxx**	 **xxx**
Operating Expenses: Administration Selling & Distribution **Total Operating Expenses (B)**	 **xxx**	 **xxx**	 **xxx**	 **xxx**
Operating profit (A-B) = (C) **Add: Non-operating Income:** Interest on investments **Total (D)**	**xxx** **xxx**	**xxx** **xxx**	**xxx** **xxx**	**xxx** **xxx**
Non-operating Expenses: Interest Income-tax Finance exp Goodwill written off **Total Non-operating Expenses (E)**	 **xxx**	 **xxx**	 **xxx**	 **xxx**
Net profit (D-E)	**xxx**	**xxx**	**xxx**	**xxx**

FORMAT FOR TREND PERCENTAGES

- **TREND PERCENTAGES (BALANCE SHEET)**

______________Co. Ltd.

STATEMENT SHOWING TREND PERCENTAGES

PARTICULARS	YEAR END (Rs.)				TREND PERCENTAGES BASE YEAR xxxx (Y1)			
	Y1	**Y2**	**Y3**	**Y4**	**Y1**	**Y2**	**Y3**	**Y4**
I. Assets:								
A) Current Assets								
Inventory								
Debtors								
Cash and Bank								
Other current assets								
Total CA (A)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
B) Fixed Assets								
Land and Buildings								
Plant & Machinery								
Furniture								
Total FA (B)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
Total Assets (A+B)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
II. Liabilities & Capital:								
Current Liabilities								
Sundry Creditors								
Bills Payable								
Tax payable								
Provision for tax								
Proposed Dividend								
Total CL (A)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
Long-term Liabilities								
Debentures								
Term Loans	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
Total long-term liabilities (B)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
Total liabilities (A+B) = (C)								
Capital and Reserves								
Equity Share Capital								
Preference Share Capital								
Reserves & Surplus								
Retained earnings								
General Reserve								
Profit & Loss A/c								
Total Shareholders' fund (D)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**
Total liabilities & Capital (C+D)	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**	**xxx**

- **TREND PERCENTAGES (INCOME STATEMENT)**

______________Co. Ltd.

STATEMENT SHOWING TREND PERCENTAGES FOR THE PERIOD Y1 TO Y4

PARTICULARS	**YEAR END (₹)**				**TREND PERCENTAGES BASE YEAR xxxx (Y1)**			
	Y1	**Y2**	**Y3**	**Y4**	**Y1**	**Y2**	**Y3**	**Y4**
Net Sales **Less:** Cost of Goods Sold **Gross Profit (A)**	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Operating Expenses: Administration Selling & Distribution **Total Operating Expenses (B)**	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Operating profit (A-B) = (C)	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Add: Non-operating Income: Interest on investments **Total (D)**	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Non-operating Expenses: Interest Income-tax Finance exp Goodwill written off **Total Non-operating Expenses (E)**	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Net profit (D-E)	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

RATIO ANALYSIS

Analysis and interpretation of financial statements with the help of ratios is termed as Ratio analysis. It involves the process of computing, determining and presenting the relationship of items or groups of items of financial statements.

A ‘ratio’ is a mathematical relationship between two items expressed in quantitative form. Ratios can be defined as “Relationships expressed in quantitative terms, between figures which have cause and effect relationships or which are connected with each other in some, manner or the other”.

“The analysis of financial statement data is an attempt to determine the significance and meaning of the financial statement data so that the forecast may be made of the future prospects for earnings, ability to pay interest and debt (both shot and long term) and profitability”.

ADVANTAGES/BENEFITS OF RATIOS ANALYSIS

- **Forecasting**

Ratio reveals the trends in costs, sales, profits and other inter-related facts, which will be helpful in forecasting future events.

- **Managerial Control**

Ratios can be used as “instrument of control” regarding sales, costs and profit.

- **Facilitates Communication**

Ratios facilitate the communication function of management as ratios convey the information relating to the present and future quickly, forcefully and clearly.

- **Measuring Efficiency**

Ratios help to know operational efficiency by comparison of present ratios with those of the past working and also with those of other firms in the industry.

- **Facilitating investment decisions**

Ratios are helpful in computing return on investment. This helps the management in exercising effective decisions regarding profitable avenues of investment.

- **Useful to measure financial solvency**

The financial statements disclose the assets and liabilities in a format. But they do not convey relationship of various assets and liabilities with each other, whereas ratios indicate the liquidity position of the company and the proportion of borrowed funds to total resources which reveal the short term and long term solvency position of a firm.

- **Inter firm Comparisons**

The technique of inter-firm comparisons can be carried out successfully only with the help of ratio analysis. Otherwise no firm may come forward to disclose full information. Inter-firm comparisons help the management to compare its performance with an external standard.

LIMITATIONS OF RATIO ANALYSIS

- **Practical knowledge**

The analyst should have thorough knowledge and experience about the firm and industry. Otherwise his analysis and interpretations are of little practical use.

- **Ratios are means**

Ratios are not an end in themselves- but they are means to achieve a particular purpose or end.

- **Inter-relationship**

Ratios are inter-related and therefore a single ratio cannot convey a meaning. It has to be interpreted with reference to other related ratios to draw managerial conclusions.

- **Non Availability of standards or norms**

Ratios will be meaningful if they can be compared with standards or norms, except for a few financial ratios, other ratios lack standards which are universally recognized.

- **Depends on financial statements**

The accuracy of a ratio depends on the accuracy of information derived from financial statements. If the statements are inaccurate, same will be the result with ratios.

- **Consistency in preparation of financial statements**

Inter-firm comparisons with the help of ratio analysis will be useful only if the firms use uniform accounting procedures consistently. Otherwise the comparison may be useless.

- **Detachment from financial statements**

Ratios are not substitutes to financial statements. They can be meaningful only if they are read along with information with which they are prepared. If the information is detached, ratios themselves cannot convey much useful message.

- **Time lag**

Ratio analysis will be fruitful only if the conclusions are conveyed quickly to the management. If there is a delay, the utility of the data is diminished and the purpose itself may be defeated.

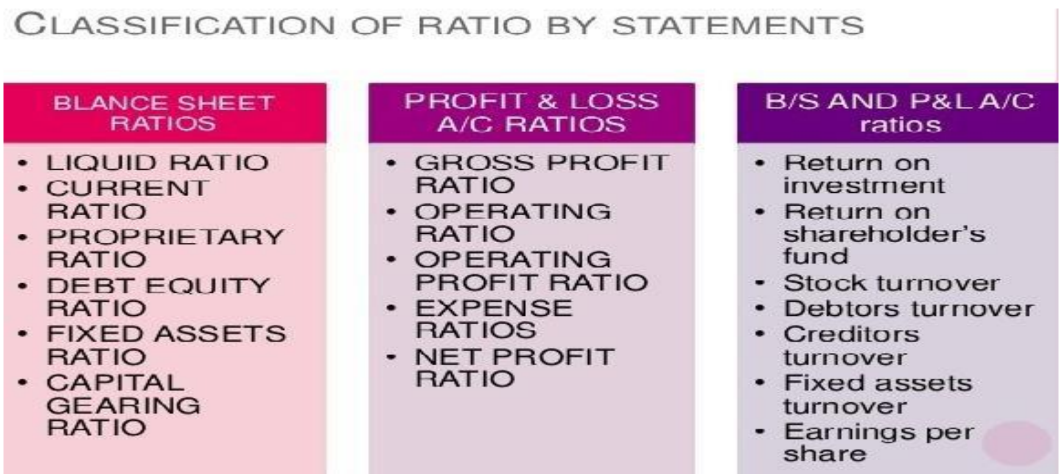
- **Change in price level**

Ratio analysis becomes redundant during periods of heavy price fluctuations. It may be concluded that ratio analysis, if not done properly or done mechanically, would be both misleading and dangerous. It is an aid to management to take correct decisions, but as a mechanical substitute for personal judgment and thinking, it would be useless.

CLASSIFICATIONS OF RATIOS

- **CLASSIFICATION ACCORDING TO ACCOUNTING STATEMENTS**:

This classification is based on the nature of accounting standards on which the items used for compiling ratios appear. Accordingly, the different subdivisions are:



- **Balance Sheet Ratios:**

These ratios are also called as financial ratios. The components for computation of these ratios are drawn from the balance sheet. Examples: Current ratio, debt equity ratio etc.

- **Profit and loss account ratios:**

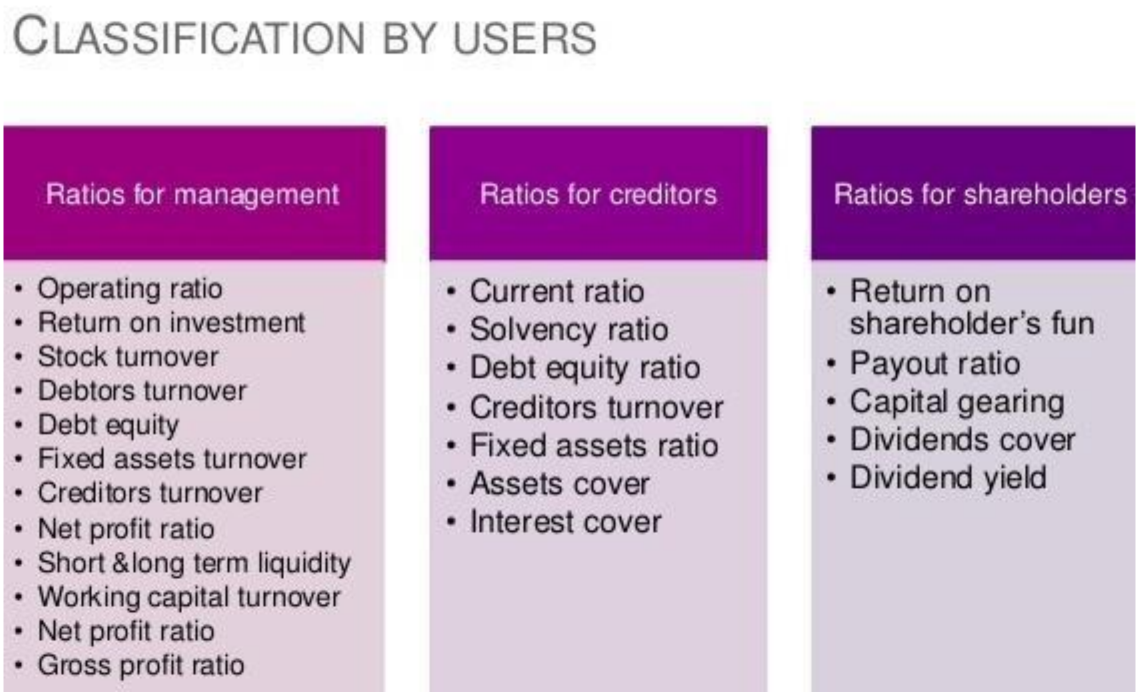
These ratios are also called as operating ratios. The items used for the calculation of these ratios are usually taken out from the income statement etc. Examples are Gross profit ratio, net profit ratio, operating profit ratio etc.

- **Combined ratios:**

The information required for the computation of these ratios is normally from both Balance Sheet and Trading and Profit and loss account. Examples are Debtors turnover ratio, Creditors turnover ratio, Stock turnover ratio etc.

➢ CLASSIFICATION ACCORDING TO USERS:

Ratios are grouped on the basis of the parties who make use of the ratios. The following is the classification of ratios by major users, though several others also use ratios:



➢ **Ratios for Management:**

- ➢ Turnover ratios like stock turnover, debtors turnover and fixed assets turnover relect managerial efficiency in handling the assets.
- ➢ Profitability ratios like net profit ratio, gross profit ratio, return on investment reveal the final result of the managerial policies and performance.
- ➢ The short term and long term solvency ratios like current ratio, liquid ratio, debt equity ratio reveal the solvency position of the firm to the management.

➢ **Ratios for Creditors:**

Creditiors are interested in the ability of the firm to repay and the security for their loans. Coverage ratios, Liquidity ratios and long term solvency ratios are more relevant to the lenders.

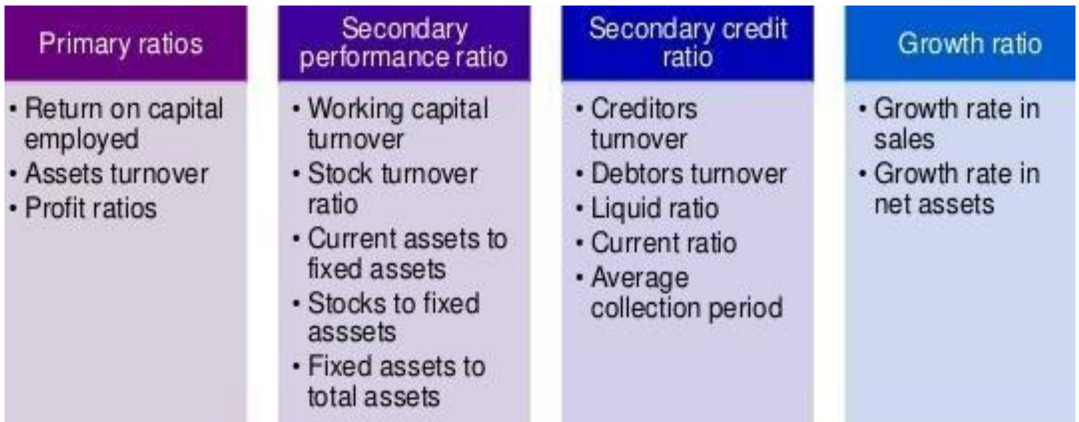
➢ **Ratios for Shareholders:**

Shareholders are concerned with profits, dividends and risk. The profitability ratios, payout ratio, dividend cover, capital gearing, etc., are more relevant for their interests.

CLASSIFICATION ACCORDING TO RELATIVE IMPORTANCE:

This classification is being adopted by the British Institute of Management, where there are four types of ratios:

CLASSIFICATION BY RELATIVE IMPORTANCE



➢ **Primary ratios:**

They are also known as explanatory ratios which include, return on capital employed, assets turnover and profit ratios.

➢ **Secondary performance ratios:**

Secondary performance ratios include, working capital turnover, stock to current assets, current assets to fixed assets, stock to fixed assets and fixed assets to total assets.

➢ **Secondary credit ratios:**

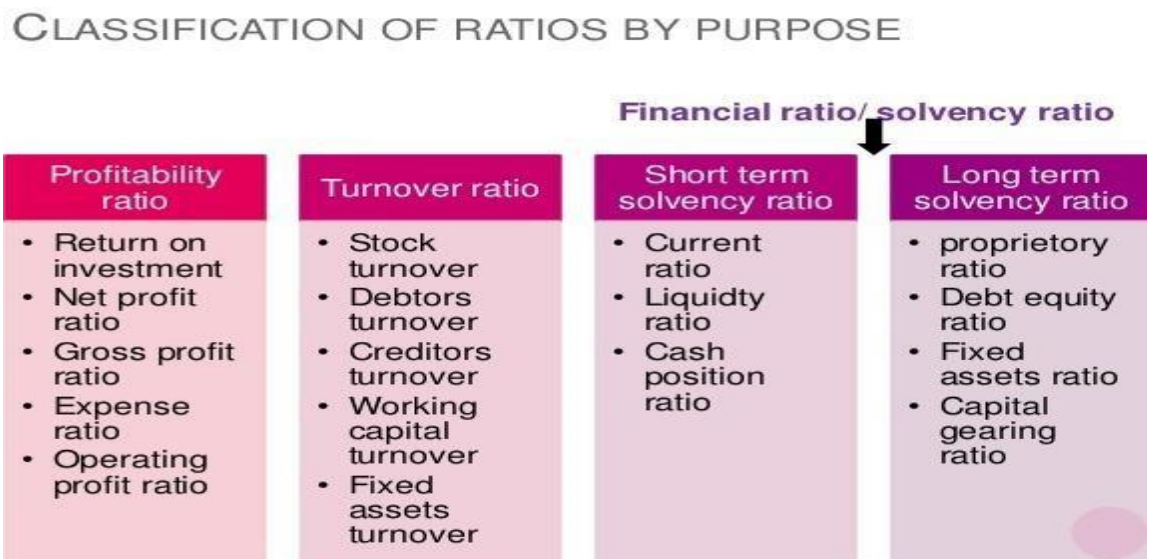
Secondary credit ratios include, creditors turnover, debtors turnover, liquid ratio, current ratio and average collection period.

➢ **Growth ratios:**

Growth ratios include growth ratio in sales and growth rate in net assets.

➢ **CLASSIFICATION ACCORDING TO PURPOSE/FUNCTION**

Under this classification, ratios are grouped as follows:



➢ **Profitability Ratios:**

These ratios are intended to measure the end result of business operations. Examples: Gross profit ratio, Return on capital employed and operating ratio.

➢ **Turnover or activity ratios:**

These ratios enable measurement of the effectiveness of the usage of resources at the command of the concern. Examples: Fixed assets Turnover ratio, Stock turnover ratio. These ratios would also indicate the profitability position of the business

➢ **Solvency ratios:**

- ➢ **Liquidity ratios -** These ratios are used to measure the abilities of the firm to meet its maturing obligations or current liabilities examples: Current ratio, Acid test ratio.
- ➢ **Leverage ratios -** These ratios help to measure the financial contribution of the owners compared to that of creditors as also the risk of debt financing. They are also known as capital structure ratios. Example: Debt to Equity ratio, fixed assets to Net worth, Inter coverage ratio.

RATIO ANALYSIS FORMULA

I. PROFITABILITY RATIOS

GROSS PROFIT RATIO $= \dfrac{\text{Gross profit}}{\text{Net Sales}} \times 100$

NET PROFIT RATIO $= \dfrac{\text{Net Profit}}{\text{Net Sales}} \times 100$

OPERATING RATIO or OPERATING EXPENSES RATIO

$$= \frac{\text{Cost of Goods Sold + Operating Expenses}}{\text{Net Sales}} \times 100$$

Sales = Cost of Goods Sold + Gross

profit Cost of Goods Sold = Sales - Gross Profit

Sales- Gross Profit = Cost of Goods Sold

Cost of Goods Sold = Opening Stock + Purchases - Closing Stock

Operating expenses = All expenses in Profit and Loss account - Non operating expenses

Non-Operating expenses = loss on sale of assets, by fire, Provision for Legal suit etc.

OPERATING PROFIT RATIO $= \dfrac{\text{Operating Profit}}{\text{Net Sales}} \times 100$

Operating profit = Net Profit + Non operating exp - non operating income

Note for Verifications: Operating Ratio + Operating Profit Ratio = 100%

INTEREST COVERAGE RATIO $= \dfrac{\text{Net Profit,before Interest and Tax}}{\text{Total Fixed Interest Payable}}$

II. SOLVENCY RATIOS (BALANCE SHEET)

CURRENT RATIO $= \dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

Current Assets = Stock + Cash in hand \ at bank + Sundry Debtors + Bi1ls receivable + Prepaid expenses + Accrued income + Any other amount receivable within a year

Current Liabilities = Sundry creditors + Bills Payable + Outstanding expenses + Income received in advance

Working Capital = Current Assets - Current Liabilities

QUICK RATIO OR LIQUID RATIOS $= \dfrac{\text{Quick Assets}}{\text{Quick liabilities}}$ OR

$= \dfrac{\text{Quick assets}}{\text{Current liabilities}}$

Quick assets = Current Assets - Stock - Prepaid

exp. Liquid liabilities = Current Liabilities - Bank Overdraft

CASH POSITION RATIO $= \dfrac{\text{Cash and Bank balance + Marketable Securities}}{\text{Current Liabilities}}$

DEBT EQUITY RATIOS $= \dfrac{\text{Outsiders Funds}}{\text{Shareholders Funds}}$ OR $\dfrac{\text{Long term Debts}}{\text{Shareholders Funds}}$

Outsiders Funds = All external liabilities like creditors, Bills payable, overdraft, debentures, mortgage loan etc.

Shareholders Funds = Preference share capital + Equity share capital+Reserves+Profit

FIXED ASSETS RATIO $= \dfrac{\text{Fixed Assets}}{\text{Long term funds}}$

Long term funds = Shareholders fund + long term liabilities

Shareholders funds or Net worth +Long term Liability + Current Liability = Fixed Assets + Current Assets

PROPRIETARY RATIO = $\frac{\text{Proprietor Fund or Shareholders Fund}}{\text{Total Assets}}$

CAPITAL SEARING RATIO = $\frac{\text{Fixed interest bearing securities}}{\text{Equity capital}}$

Fixed interest bearing securities = Debentures, Preference share Capital

III. TURNOVER RATIOS

STOCK TURNOVER RATIO = $\frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$ OR $\frac{\text{Cost of Goods sold}}{\text{Closing Stock}}$

STOCK VELOCITY

Stock Velocity = $\frac{\text{No of days or No of months in a year}}{\text{Stock Turnover Ratio}}$

DEBTORS TURNOVER RATIO = $\frac{\text{Credit sales}}{\text{Accounts}}$

Receivable Accounts Receivable = Sundry Debtors + Bills Receivable

DEBTOR'S COLLECTION PERIOD (DCP) OR DEBTORS VELOCITY

DCP = $\frac{\text{No of days or No of months in a year}}{\text{Debtors Turnover Ratio}}$

CREDITORS TURNOVER RATIO = $\frac{\text{Credit purchases}}{\text{Accounts Payable}}$

Accounts Payable = Creditors + payable

CREDITORS PAYMENT PERIOD (CPP) OR CREDITORS VELOCITY

CPP = $\frac{\text{No of days or No of months in a year}}{\text{Creditors Turnover Ratio}}$

FIXED ASSETS TURNOVER RATIO = $\frac{\text{Net sales}}{\text{Net fixed Assets}}$ or $\frac{\text{Cost of Goods Sold}}{\text{Net Fixed Assets}}$

NOTE:

- In the problem if there is no information about cash sales, entire sales should be considered as credit sales
- If the term "to" is used in between two information, put the first word as numerator and the last word as denominator.
- In the problem the term TURNOVER refers cost of sales, use cost of sales in turnover ratios.

HOW TD APPROACH THE PROBLEM

Step 1: Start the problem from the information given as amount (preferably from working capital or gross profit)

Step 2: At the end of the first step we will get some data as amount.

Step 3: Use the formulas which will relates to the data we had.

SCHOOL OF LAW

UNIT – III - Management Accounting – SBA1501

UNIT III

FUNDS FLOW AND CASH FLOW STATEMENTS

Meaning & Concept of funds - Flow of funds - Fund flow statement - Uses - Significance and limitations – Procedure for preparing fund flow Statements - Cash flow Statements - Cash flow - Cash flow Statement - Uses, significance and limitations - Difference between fund flow statement and cash flow statement - Procedure for preparing cash flow statements. Interpretation of Funds Flow Statements.

FUNDS FLOW STATEMENT

According to R.N.Anthony, "Funds Flow is a statement prepared to indicate the increase in cash resources and utilization of such resources of a business during the accounting period." According to Smith Brown, "Fund Flow Statement is prepared in summary form to indicate changes occurring in items of financial condition between two different balance sheet dates showing clearly the sources and application of funds."

The major purpose of the Funds flow statement is to provide a detailed presentation of the results of financial management, as distinguished from operating management. It summarizes the financing and investing activities of the enterprise. The statement shows directly the information, that the readers of financial reports could otherwise obtain only by making an analysis and interpretation of published balance sheets and statements of income and retained earnings.

Sources of funds	**Application of funds**
Issue of Equity and preference shares	Redemption of shares
Issue of Debentures	Redemption of debentures
New loans or further loan	Repayment of loans
Sale of fixed assets	Purchase of fixed assets
Any other income	Dividend paid, taxes paid etc
Funds from operations	Funds lost in operations

OBJECTIVES

a) Indication of Financial Results

Funds flow statement should reveal the effect of financial decisions taken and their consequences. For example, the decision to take a bank loan is reflected in the increase of working capital

b) Emphasis on significance changes

Funds flow statement aims at revealing the changes in assets and asset sources which are not readily evident in the Income Statement or Balance sheet.

c) Illustration of relationship

Funds flow statement aims at establishing the cause and effect relationship between events like profit made and dividend disbursed, term loan raised and fixed assets acquired.

d) Revealing financial strengths and Weakness

Funds flow statement has to throw light on the firm's ability to generate funds and use them fruitfully. It also has to reveal any weakness in the financial position of the firm.

e) Distinguishing internal and external sources

The internal and external sources of.funds have to be clearly differentiated. Funds from operation indicate the internal generation of funds. Such analysis is necessary to know the inherent ability of the firm in generating funds.

f) Giving prominence to dynamic concept of business

Funds flow statement has Jo focus on the dynamic nature of business by revealing the constant changes in the position of funds.

IMPORTANCE OF FUNDS FLOW STATEMENT

- It provides a detailed analysis and understanding of changes in the distribution of financial resources between two balance sheets.
- It shows how the funds were obtained and used during a period.
- The sources from which funds were obtained are useful in computation of cost of capital of the business.
- A detailed analysis of sources of funds in the past acts as a guide for obtaining funds for future requirements.

- A study of the applications of funds provides an understanding about the utilization of resources in the past. It can form the basis for selection of investment proposals or future capital expenditure decision.
- It gives indication of any weakness or strength in the general financial position of a firm.
- It throws light on the financial consequences of business operations. It can be compared with the relevant budget to assess the usage of funds as per plans.
- Rearrangement of capital structure, formulating long term financial plans and policies, etc. is facilitated by funds flow analysis.
- Working capital and the causes for changes in working capital are highlighted. This can help in the formulation of sound policy for liquidity and shot term solvency of the firm.

LIMITATIONS

- Funds flow statement is historical in nature. It shows v/hat happened in the past. So, necessarily, its value is limited from the point of view of future operations.
- It is nothing but secondary data. The information in financial accounts is rearranged and presented. So its accuracy and reliability depend on the accounting department.
- It is a summarized presentation of figures and cannot provide information about changes on a continuous basis.
- The effects of transactions between current assets arid liabilities are not shown in the statement. It also ignores transactions between long term assets and liabilities.
- It is not generally considered as a sophisticated technique of financial analysis.

STEPS INVOLVED IN PREPARATION OF FUNDS FLOW STATEMENT

1) Preparation of schedule of changes in working capital
2) Preparation of non-current accounts (Ledger accounts)
3) Calculation of funds from operations
4) Preparation of funds flow statement

1) PREPARATION OF SCHEDULE OF CHANGES IN WORKING CAPITAL

The following rules may be kept in mind while preparing working capital statement:

a) Increase in Current Asset - Increases Working Capital

b) Decrease in Current Asset - Decreases Working Capital

c) Increase in Current Liability - Decreases Working Capital

d) Decrease in Current Liability - Increases Working Capital

FORMAT STATEMENT OF SCHEDULE OF CHANGES IN WORKING CAPITAL

PARTICULARS	PREVIOUS YEAR	CURRENT YEAR	EFFECT ON W.C. (INCREASE)	EFFECT ON W.C (DECREASE)
CURRENT ASSET: (A)				
Cash in hand	xx	xx	xx	
Cash at bank	xx	xx	xx	
Sundry debtors	xx	xx		xx
Bills receivable	xx	xx		xx
Short-term investment	xx	xx	xx	
Stock	xx	xx	xx	
Prepaid expenses	xx	xx	xx	
Accrued income but not received	xx	xx	xx	
Total (A)	**xx**	**xx**		
CURRENT LIABILITIES: (B)				
Sundry creditors	xx	xx		xx
Bills payable	xx	xx		xx
Bank overdraft	xx	xx	xx	
Short term advances/loan	xx	xx	xx	
Dividend payable	xx	xx	xx	
Outstanding expenses	xx	xx	xx	
• Provision for taxation	xx	xx	xx	
• Proposed dividend	xx	xx	xx	
Total (B)	**xx**	**xx**		
Working capital (A-B)	**xx**	**xx**		
Net increase or decrease in working capital	**xx**		-	**xx**
	xx	**xx**	**xx**	**xx**

- **COMPUTATION OF FUNDS FOR OPERATION**

There are two methods for determining funds for operation. They are:

1) Account form

2) Statement form

1) ACCOUNT FORM:

ADJUSTED PROFIT AND LOSS ACCOUNT

PARTICULARS	Rs.	PARTICULARS	Rs.
To depreciation	xx	By balance b/d (opening balance)	xx
To loss on sale of fixed asset	xx	By profit on sale of fixed asset	xx
To loss on sale of investment	xx	By profit on sale of investment	xx
To goodwill written off	xx	By interest on investment	xx
To discount on issue of shares written off	xx	By dividend received or receivable	xx
To preliminary expenses written off	xx	By excess provision written back	xx
To dividend (including interim dividend)	xx	By refund of income tax	xx
To provision for tax	xx	By funds from operations	xx
To proposed dividend	xx	(balancing Figure)	
To transfer to general reserve	xx		
To balance c/d (closing balance)	xx		
	xx		**xx**

2) STATEMENT FORM:

STATEMENT SHOWING FUNDS FROM OPERATION

PARTICULARS	Rs.	Rs.
Net profit made during the year		**xx**
Add: (Items which do not decrease funds from operatons but		
debited to P & L a/c)	xx	
Depreciation	xx	
Loss on sale of fixed asset	xx	
Loss on sale of long term investment	xx	
Goodwill written off	xx	
Discount on issue of shares written off	xx	
Preliminary expenses written off	xx	
Interim dividend	xx	
Provision for tax	xx	
Proposed dividend	xx	**xx**
Transfer to general reserve		
Less: (**Items which do not increase funds from operations but**	xx	
credited to P & L a/c)	xx	
Profit on sale of fixed asset	xx	
Profit on sale of investment	xx	
Interest on investment	xx	
Dividend received	xx	
Excess provision written back		
Refund of income tax		**xx**
Funds From Operations		**xxx**

- **PREPARATION OF FUNDS FLOW STATEMENT**

1) ACCOUNT FORM:

FUNDS FLOW STATEMENT FOR THE YEAR ENDED

SOURCES OF FUNDS	**Rs.**	**APPLICATIONS OF FUNDS**	**Rs.**
Funds from operations	xx	Funds lost in operations	xx
Issue of shares	xx	Redemption of redeemable preference shares	xx
Issue of debentures	xx	Redemption of debentures	xx
Sale of investment	xx	Repayment of other long term loans	xx
Sale of fixed asset	xx	Purchase of investment	xx
Non trading income	xx	Purchase of other fixed asset	xx
Decrease in working capital (B.F)	xx	Payment of tax	xx
		Payment of dividend	xx
		Non trading expenses	xx
		Increase in working capital (B.F)	xx
	xxx		**xxx**

2. STATEMENT FORM

FUNDS FLOW STATEMENT FOR THE YEAR ENDED….

PARTICULARS	Rs.	Rs.
Sources of funds: (A)		
Funds from operations	xx	
Issue of shares	xx	
Issue of debentures	xx	
Sale of debenture	xx	
Sale of fixed asset	xx	
Non trading income	xx	
Total sources (A)		**xx**
Applications of funds: (B)		
Funds lost in operations	xx	
Redemption of redeemable preference shares	xx	
Redemption of debentures	xx	
Repayment of other long term loans	xx	
Purchase of investment	xx	
Payment of tax	xx	
Payment of dividend (for last year and interim)	xx	
Non trading expenses	xx	
Total applications (B)		**xx**
Net increase in working capital (A-B)		**xx**

CASH FLOW STATEMENT

It is an analysis based on the movement of cash and bank balances. Under cash flow analysis, all movements of cash, rather than the movement of working capital would be considered. Such movements of cash are depicted in a statement called cash flow statement. It is a statement of changes in financial position prepared on cash basis.

ADVANTAGES OF CASH FLOW STATEMENT

a) Historical analysis as guide to forecasting

Cash flow statement presents in detail the movements of cash in the recent past. This can provide clear indications for the cash flows in the future period, thus helping forecasting the future commitments and needs.

b) Effective cash management

Cash flow statement can act as a guide for coordinating the inflows and outflows of cash. The matching of the future cash receipts with payments results in effective cash management.

c) Formulation of financial policies

A clear, insight into the cash flows of the firm is the basis for financial policies like dividend policy, cash discount, credit terms, etc.

d) Preparations of cash budget

Cash flow statement is almost like the foundation for cash Budget. The cash flows in the recent past indicate the quantum and direction of such flows and form the basis for preparing monthly or quarterly budgets for cash or even the annual cash budget for ensuing year.

e) Short term financial decisions

Short range financial decisions like repayment of overdraft loans, payment of bonus, advertising campaigns, investments outside the firm etc., may be taken on the basis of the analysis provided by the cash flow statement.

f) Liquidity position

It reveals the liquidity position of the firm by highlighting the various sources of cash and its uses.

g) Revaluations

It can reveal the causes for profitable firms experiencing acute cash shortages. The reasons for any mismanagement of cash for creating such a position can be analyzed and its recurrence can be avoided.

LIMITATIONS OF CASH FLOW STATEMENT

Cash flow statement is a useful tool of financial analysis. However, it suffers from some limitations, which are as follows:

- A cash flow statement only reveals the inflow and outflow of cash. The cash balance disclosed by this statement may not depict the true liquid position. There are controversies over a number of items like cheques, stamps, postal orders etc. to be included in cash.
- A cash fund statement cannot be equated with the income statement. An income statement takes into account both cash and non-cash items. Hence cash funds do not mean net income of the business.
- Working capital being a wider concept of funds, a funds flow statement presents a more complete picture than cash flow statement.

DISTINCTIONS BETWEEN FUNDS FLOW STATEMENT AND CASH FLOW STATEMENT

Difference between Funds Flow Statement and Cash Flow Statement

Basis of Difference	Funds Flow Statement	Cash Flow Statement
Basis of Analysis	Funds flow statement is based on broader concept i.e. working capital.	Cash flow statement is based on narrow concept i.e. cash, which is only one of the elements of working capital.
Objective	The object funds flow statement is to disclose the magnitude, direction and causes of changes in working capital.	The object of cash flow is to disclose the magnitude, direction and causes of changes in cash and cash equivalents.
Source	Funds flow statement tells about the various sources from where the funds generated with various uses to which they are put.	Cash flow statement starts with the opening balance of cash and reaches to the closing balance of cash by proceeding through sources and uses.
Usefulness	Funds flow statement is more useful in assessing the long-term financial position.	Cash flow statement is more useful in assessing the short-term financial position of the business.
Schedule of Changes in Working Capital	In funds flow statement changes in current assets and current liabilities are shown through the schedule of changes in working capital.	In cash flow statement changes in current assets and current liabilities are shown in the cash flow statement.
Causes	Funds flow statement shows the causes of changes in net working capital.	Cash flow statement shows the causes of changes in cash.
Principal of Accounting	Funds flow statement is based on the accrual basis of accounting.	In cash flow statement, data are obtained on accrual basis which are converted into cash basis.
Compulsion	There is no prescribed form for preparation of Funds flow statement.	Cash flow statement is compulsory to be prepared in prescribed proforma as given in AS – 3.
Relationship	Funds flow statement can be prepared from the cash flow statement under indirect method.	But a cash flow statement cannot be prepared from funds flow statement.
Financial Health	Sound fund position does not necessarily mean sound cash position.	But sound cash position is always followed by sound fund position.

STEPS INVOLVED IN PREPARATION OF CASH FLOW STATEMENT

1) Preparation of non current accounts (Ledger accounts)
   a) Fixed asset account
   b) Accumulated depreciation account
   c) Investment account
   d) Provision for taxation account
2) Calculation of funds from operation (refer the format given in FFS steps)
3) Calculation of cash from operations
4) Preparation of cash flow statement

III) CALCULATION OF CASH FROM OPERATIONS

CASH FROM OPERATIONS

PARTICULARS	Rs.	Rs.
Funds From Operations		xxx
Add: Decrease in current asset except Cash & Bank	xxx	
Increase in current liabilities	xxx	
		xxx
Less: Increase in current asset except Cash & Bank	xx	
Decrease in current liabilities	xx	xxx
Cash From Operations		**xxx**

IV) CASH FLOW STATEMENT AS PER ACCOUNTING STANDERD 3

1) ACCOUNT FORM:

CASH FLOW STATEMENT FOR THE YEAR ENDED ......

SOURCES OF FUNDS	Rs.	APPLICATIONS OF FUNDS	Rs.
Opening balances: Cash & Bank	xx	Cash outflow on account of operations	xx
Cash from operations	xx	Redemption of preference shares	xx
Issue of shares	xx	Redemption of debentures	xx
Issue of debentures	xx	Repayment of loans	xx
Sale of investment	xx	Purchase of investment	xx
Sale of fixed asset	xx	Purchase of fixed asset	xx
Loans borrowed, etc	xx	Payment of tax	xx
		Payment of dividend	xx
		Opening balances: Cash & Bank	xx
	xxx		**xxx**

2) STATEMENT FORM

CASH FLOW STATEMENT FOR THE YEAR ENDED ......

PARTICULARS	**Rs.**	**Rs.**
Opening balances: Cash & Bank		xx
Add: Sources of funds: (A)		
Cash from operations	xx	
Issue of shares	xx	
Issue of debentures	xx	
Sale of debenture	xx	
Sale of fixed asset	xx	
Non trading income	xx	
Total sources (A)		**xx**
Applications of funds: (B)		
Cash outflow on account of operations	xx	
Redemption of redeemable preference shares	xx	
Redemption of debentures	xx	
Repayment of other long term loans	xx	
Purchase of investment	xx	
Payment of tax	xx	
Payment of dividend (for last year and interim)	xx	
Total applications (B)		**xx**
Opening balances: Cash & Bank		**xx**

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UNIT – IV - Management Accounting – SBA1501

UNIT IV

MARGINAL COSTING

Nature and Scope Basic concepts - Definition of marginal cost and marginal costing - Assumptions of marginal costing - CVP Analysis - Meaning, Importance and limitations of CVP analysis - Break-even Point - Breakeven chart – Margin of Safety - Profit Volume Graph - Applications in decision making

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MARGINAL COSTING

Marginal costing is defined by I.C.M.A., as "the ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs.

Marginal costing identifies the Marginal Cost of production and shows its impact on profit for the change in the output units. Marginal cost refers to "the movement in the total cost, due to the production of an additional unit of output". Marginal cost is defined by I.C.M.A., as "the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. As such, it arises from the production of additional increments of output.

In marginal costing, all the variable costs are regarded as product related costs while

fixed costs are assumed as period costs. Therefore, fixed cost of production is posted to the Profit & Loss Account. Moreover, fixed cost is also not given relevance while determining the selling price of the product or at the time of valuation of closing stock.

FEATURES

- Marginal costing is a technique of working of costing, which is fixed cost and variable costs are kept separate at every stage. Semi-variable costs are also separated into fixed and variable.
- As fixed costs are period costs, they are excluded from product cost or cost of production or cost of sales. Only variable costs are considered as the cost of the product.
- The stock of finished goods and work-in-progress are valued at variable costs.
- As fixed costs are period costs they are charged to profit and loss account during period in which they are occurred. They are carried forward to the next year's income.
- Contribution is ascertained by finding the difference between the marginal cost or variable cost and the selling price.
- Profit is ascertained by finding the difference between the contribution and fixed costs of all products or departments or processes or divisions, etc.
- The profitability at various level of activity is ascertained by calculating Cost-volume- profit relationship.
- Fixed cost remains constant irrespective of level of activity.
- Sales price and variable cost per unit remain the same.

ADVANTAGES OF MARGINAL COSTING

1. The marginal costing technique is very **simple to understand** and **easy to operate**. The reason is that the fixed costs are not included in the cost of production and there is no arbitrary apportionment of fixed costs.
2. The current year fixed costs is not carried forward to the next year. As such, cost and profit are not vitiated. **Cost comparisons become meaningful**.
3. The contribution is used as a tool in managerial decision-making. It provides a more **reliable measure for decision-making**.
4. Marginal costing shows more clearly the **impact on profit** of fluctuations in the volume of sales.

5. Under absorption and **over absorption of overheads problems are not arisen** under marginal costing.

6. The marginal costing technique **can be combined with standard costing**.

7. The prevailing relationship between **cost, selling price and volume** are properly explained in clear terms.

8. It **shows the relative contributions to profit** that are made by each of a number of products and show where the sales effort should be contracted.

9. The **management can take short run tactical decisions** with the help of marginal costing information.

DISADVANTAGES OF MARGINAL COSTING

1. The **total costs cannot be easily segregated** into fixed costs and variable costs.

2. Moreover, it is also **very difficult to per-determine the degree of variability** of semi-variable costs.

3. Under marginal costing, the fixed costs remain constant and variable costs are varying according to level of output. In reality, the **fixed costs do not remain constant and the variable costs are not varying** according to level of output.

4. There is **no meaning in the exclusion of fixed costs** from the valuation of finished goods since the fixed costs are incurred for the purpose of manufacture of products.

5. In the case of loss by fire, **the full amount of loss cannot be recovered from the insurance company** since the stocks are undervalued.

6. **Tax authorities do not accept the valuation** of stock since the shock does not show true value.

7. The calculation of variable overheads **does not include all the variable overheads**.

8. The profit fluctuates as per the fluctuation of sales volume. Hence, the **preparation of periodic operating statements becomes unrealistic**.

9. The elimination of fixed costs renders **cost comparison of jobs difficult**.

10. The management **cannot take a quality decision** with the help of contribution alone. The contribution may vary if new techniques followed in the production process.

11. The fixed costs are **constant only for short period**. In the long run, all the costs are variable.

ASSUMPTIONS OF MARGINAL COSTING

1. All costs are divided into fixed and variable
2. Fixed cost remain constant at all levels of activity
3. Variable cost varies but unit cost will not vary
4. Selling price remains same
5. Price of material, rates of labour, etc. constant
6. Volume of production only influence costs
7. There is no stock

MARGINAL COSTING PROFORMA

Particulars	Amount (Rs.)
Sales	xxx
- Variable cost	xxx
Contribution	xxx
- Fixed Cost	xxx
Profit	xxx

CONCEPT OF COST-VOLUME-PROFIT ANALYSIS

Cost-volume-pro fit (CVP) analysis is an analytical tool for studying the relationship between volume, cost, prices, and profits. It is very much an extension, or a part of marginal costing. It is an integral part of profit planning process of the firm. However, formal profit planning and control involves the use of budgets and other forecasts and the CVP analysis provides only an overview of the profit planning process. Besides it helps to evaluate the purpose and reasonableness of such budgets and forecasts. Generally, CVP analysis provides answers to questions such as:

- What will be the effect of changes in prices, costs and volume on profits?
- What minimum sales volume need be affected to avoid losses?
- Which product is the most profitable one and which product or operation of a plant should be discontinued? etc.

IMPORTANCE

The CVP analysis is very much useful to management as it provides an insight into the effects and inter-relationship of factors, which influences the profits of the firm. The relationship between cost, volume and profit makes up the profit structure of an enterprise. Hence the CVP relationship becomes essential for budgeting and profit planning. As a starting point in profit planning, it helps to determine the maximum sales volume to avoid losses, and the sales volume at which the profit goal of the firm will be achieved. .As an ultimate objective it helps management to find the most profitable combination of costs and volume. A dynamic management, therefore, uses CVP analysis to predict and evaluate the implications of its short run decisions about fixed costs, marginal costs, sales volume and selling price for its plans on a continuous basis.

SOME IMPORTANT CONCEPTS AND TERMS IN COST-VOLUME-PROFIT ANALYSIS

FIXED COST

Expenses that do not vary with the volume of production are known as fixed cost. It should be noted that fixed charges are fixed only with a certain of range of plant capacity. It should also be noted that fixed cost per units is not fixed. Examples: manager's salary, office rent, factory rent insurance etc.

VARIABLE COST

Expenses that vary almost in direct proportion to the volume of production or sales are called variable expenses. Example: fuel, packing expenses, materials, wage's etc.

DISTINCTION BETWEEN VARIABLE COST AND FIXED COST

FIXED COST	VARIABLE COST
They do not depend on the volume of production and sales.	Depends upon the volume of production and sales.
They do not normally change up to the full capacity of a firm.	They are in the nature of changing as per capacity utilization.
Fixed cost per unit always Changing	Variable cost per unit remains same.
Total of fixed cost remains constant	Total of variable always varying.
They are also termed as period cost or Time cost	They are also termed as product costs or Marginal cost

CONTRIBUTION

Contribution is the difference between sales and marginal cost (variable cost) and it is used to recover the fixed costs first. Any excess of contribution over fixed costs would be profits. When a, business manufactures more than one product, the Computation of profit realized on individual products may be difficult due to the problem of apportionment of fixed cost to different products. The rationale of contribution lies in the fact that fixed costs are done away with under marginal costing.

The concepts of contribution help to determine the break-even point, profitability of products departments etc., to select product mix for profit maximization, and to fix selling prices under different circumstances such as trade depression, export sales, price discrimination, etc.

Contribution is the definite test to ascertain whether a product or process is worthwhile to continue among different products or processes. The contribution could be used as a measure to solve the problem of key factor.

CONTRIBUTION FORMULAE

Contribution = Selling price - Variable cost

Contribution = Fixed expenses + Profit

Contribution = Sales x P/V ratio

PROFIT VOLUME (P/V) RATIO (OR) CONTRIBUTION TO SALES RATIO

The ratio that shows the relationship between the value of sales and contribution is called as P/V ratio. A more appropriate term might be the contribution/sales ratio. A higher ratio means a greater profitability and vice versa. This ratio helps in comparison of profitability of various products. Since high P/V ratio indicates high profits, the objective of every organisation should be to improve or increase the P/V ratio. P/V ratio can be improved by:

a) Decreasing the variable cost by efficiently utilizing material, machines and men.
b) Selecting most profitable product mix for production and sales
c) Increasing the selling price per unit

P/V RATIO FORMULAE

$$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \quad \text{or} \quad (C/S)$$

(or)

$$\text{P/V Ratio} = \frac{\text{Sales} - \text{Variable Cost}}{\text{Sales}} \quad \text{or} \quad \frac{(S - V)}{S}$$

(or)

$$\text{P/V Ratio} = \frac{\text{Fixed Cost} + \text{Profit}}{\text{Sales}} \quad \text{or} \quad \frac{(F + P)}{S}$$

(or)

$$\text{P/V Ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}}$$

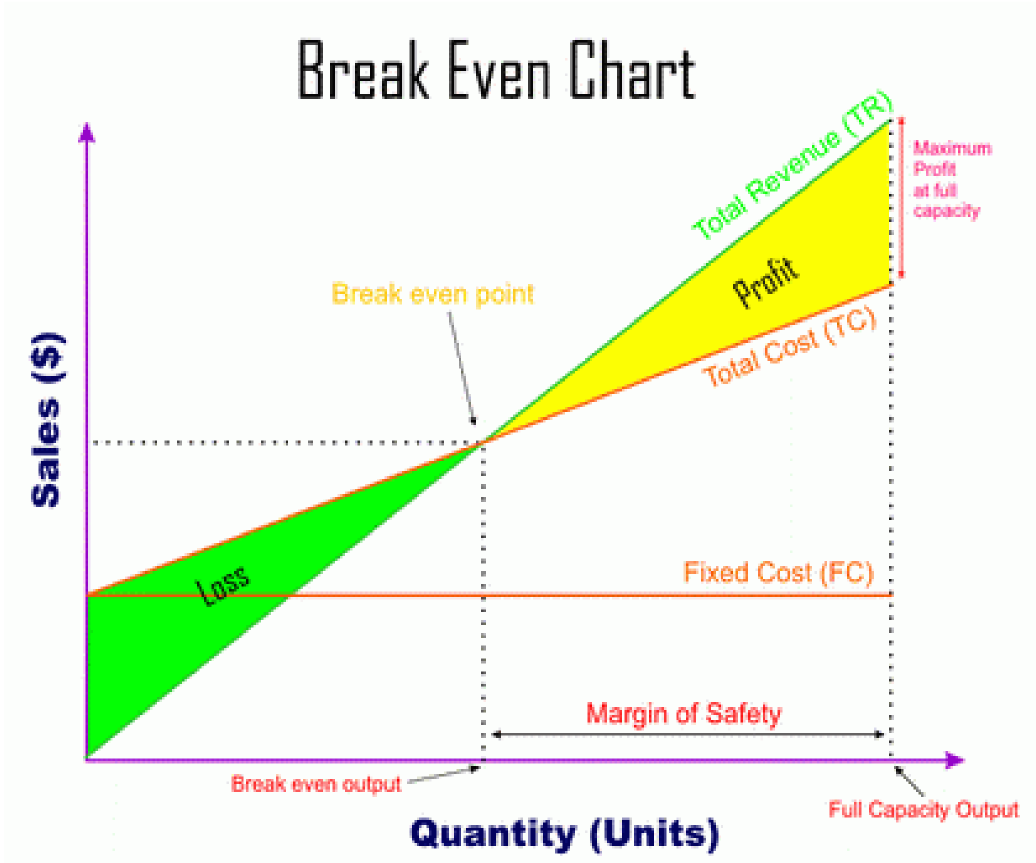
Advantages of P/V ratio

(a) Ascertainment of profit on a particular level of sales volume.
(b) Determination of break-even point.
(c) Calculation of sales required to earn a particular level of profit.
(d) Estimation of the volume of sales required to maintain the present level of profit in case selling prices are to be reduced by a stipulated margin.
(e) Useful in developing flexible budgets for cost control purposes.
(f) Identification of minimum volume of activity that the enterprise must achieve to avoid incurring losses.
(g) Provision of data on relevant costs for decisions relating to pricing, keeping or dropping product lines, accepting or rejecting particular orders, make or buy decision, sales mix planning, altering plant layout, channels of distribution specification, promotional activities etc.
(h) Guiding in fixation of selling price where the volume has a close relationship with the price level.
(i) Evaluation of the impact of cost factors on profit.

BREAK EVEN ANALYS (BEP)

Break even analysis is a method of studying relationship between revenue and costs in relation to sales volume of a business enterprise and determination of volume of sales at which total costs are equal to revenue.

According to Matz Curry and Frank “a break even analysis determines at what level cost and revenue are in equilibrium”. The study of cost-volume-profit relationship is often referred to as Break Even Analysis. Break even analysis refers to a system of determination of that level of activity where total sales are just equal to total costs. This level of activity generally termed as break-even point (B.E.P.). At break-even point a business man neither earns any profit nor incurs any loss. BEP is also called no profit, no loss point or zero profit or zero loss point.



ASSUMPTIONS OF BEP

- All costs are classified into two – fixed and variable.
- Fixed costs remain constant at all levels of output.
- Variable costs vary proportionally with the volume of output.
- Selling price per unit remains constant in spite of competition or changes in the volume of production.
- There will be no change in operating efficiency.
- There will be no change in the general price level.
- Volume of production is the only factor affecting the cost.
- Volume of sales is equal to volume of production. Hence there is no unsold stock.

ADVANTAGES

- Total cost, variable cost and fixed cost can be determined.
- Break even output or sales value can be determined.
- Cost, volume and profit relationship can be studied, and they are very useful to the managerial decision making.
- Inter-firm comparison is possible.
- It is useful for forecasting plans and profits.
- The best product mix can be selected.
- Total profits can be calculated.
- Profitability of different levels of activity based on various products or profit i.e. plans can 'be known.
- It is helpful for cost control.

LIMITATIONS

- Exact and accurate classification cost into fixed and variable is not possible. Fixed costs vary beyond a certain level or output. Variable cost per unit is, constant and it varies in proportion to the volume.
- Constant selling price is not true.
- Detailed information cannot be known from the BEP Chart. To know all the information about fixed cost, variable cost and selling price, number of charts must be drawn.
- No importance is given to opening and Closing stocks,
- Various product mixes on profits cannot be studied as the study is concerned with only one sled mix or product mix.
- Cost, volume and profit relation can be known; capital amount, market aspects, effect of government policy etc., which are important for decision-making cannot considered from Break even chart.
- If the business conditions change during a period, the break even chart becomes out of data as it assumes no change in business condition.

BEP FORMULAE:

$$\text{BEP (in units)} = \frac{\text{Fixed cost}}{\text{Selling price per unit} - \text{Variable cost per unit}}$$

(or)

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

(or)

$$\text{BEP (in units)} = \frac{\text{Break even sales value}}{\text{Selling price per unit}}$$

(or)

Break Even Sales = BEP in units x Selling price per unit

(or)

$$\text{Break Even Sales} = \frac{\text{Fixed cost}}{\text{P/V ratio}}$$

5.3.2.2 MARGIN OF SAFETY

Margin of safety is an important concept in marginal costing approach, Total sales minus the sales at breakeven sales are known as the margin of safety. (That is margin of safety is the excess of normal or actual sales over sales at breakeven point.) In other words margin of safety refers to the amount by which sales revenue can fall before a loss is incurred. That it is the difference between the actual sales and sales at the breakeven point. In High margin of safety indicates the soundness of a business because even with substantial fall in sale or fall in production, some profit shall be made. On the other hand thin (low) margin of safety is an indicator of the weak position of the business and even a small reduction in sale or production will adversely affect the profit position of the business. Margin of safety can be increased by decreasing the fixed cost, decreasing the variable cost, increasing the selling price, increasing output and sales.

MARGIN OF SAFETY FORMULAE

MARGIN OF SAFETY = Actual Sales – Break even sales

(or)

$$\text{MARGIN OF SAFETY} = \frac{\text{Profit}}{\text{P/V ratio}}$$

$$\text{MARGIN OF SAFETY in units} = \frac{\text{Profit}}{\text{Contribution per unit}}$$

REQUIRED SALES FOR GIVEN PROFIT FORMULAE

$$\text{Required sales in units} = \frac{\text{Required profit + Fixed cost}}{\text{Contribution per unit}}$$

$$\text{Required sales value in rupees} = \frac{\text{Required profit + Fixed cost}}{\text{P/V ratios}}$$

PROFIT FROM GIVEN SALES

Contribution = Given sales x P/V ratio

Profit = Contribution – Fixed cost

APPLICATIONS OF MARGINAL COSTING IN DECISION MAKING:

"Marginal costing is a valuable aid for Managerial Decisions". It helps in taking a decision in the following situations:

- **FIXATION OF SELLING PRICE**

Price is one of the most significant factors that determines the market for the products as well as the volume of the profit for the organization. Under normal circumstances the price of a product must cover the total costs of that product plus a margin of profit. However, under certain special circumstances, prices have to be fixed below the total cast, For example, when there is general trade depression or exploring new markets or accepting additional orders, the producer has to cut the price even below the total of the concerned product. Under these special circumstances, the concept of marginal cost is usefully applied to fix the prices.

- **ACCEPTING BULK ORDERS OR FOREIGN MARKET ORDERS**

Some bulk orders may be received from local dealers or foreign dealer asking for a price, which is below the market price. This calls for a decision to accept or reject the order. This order from a local dealer should not be accepted at a price below the market price because it will affect the normal market and affect the good will of the company. On the other hand, the order from the foreign dealer should be accepted because it will give additional contribution as the fixed costs have already been met.

- **MAKE OR BUY DECISION**

In a make or buy decision the price quoted by the outside suppliers should be compared with the marginal cost of producing the component parts. If the outside price of the component is lower than the marginal cost of producing it, it is worth buying. On the other hand, 'if the outside prices are higher than the marginal cost in the factory be preferred.

- **SELECTION OF SUITABLE PRODUCT MIX**

When a factory manufactures more than one product, the management faces a problem as to which product will give maximum profits. The solution is the products, which give the maximum contribution, are to be retained ad their production should be increased.

- **KEY FACTOR**

It is also known as limiting Factor. A key factor is one, which restricts production and profit of a business. It may arise due to the shortage of material, labor, capital, plant capacity or sales. Normally, when there is no limiting factor, the selection of the product will be on the basis of the highest p/v ratio. But when there are limiting factors, selection of the product will be on the basis of highest contribution per unit of the key factor.

- **MAINTAINING A DESIRED LEVEL OF PROFIT**

Management may be interested in maintaining a desired level of profits. The sales required to earn a desired level -of profits can be ascertained by the marginal costing techniques.

- **ALTERNATIVE METHODS OF PRODUCTION**

Marginal costing is helpful it comparing the alternative methods of production. The method, which gives maximum contribution, is to be adopted keeping the mind the limiting factor.

- **DETERMINATION OF OPTIMUM LEVEL OF ACTIVITY**

Marginal costing is helpful it comparing the alternative methods of production. The method, which gives maximum contribution, is to be adopted keeping the mind the limiting factor.

The technique of marginal costing helps the management in determining the optimum level of activity. To make such a decision, contribution at different levels of activity can be found. The level of activity, which gives the highest contribution, will be the optimum level. The level of production can be raised till the marginal cost does not exceed the selling price.

- **EVALUATION OF PERFORMANCE**

Evaluation of performance efficiency of various departments or product lines can be made with the help of marginal costing. The management has to discontinue the production of non-profitable products or departments so as to maximize the profits. In such cases, decision to discontinue will be on the basis of the lowest contribution or PV ratio.

- **MARIGINAL ASCERTAINMENT**

Marginal costing technique facilitates not only the recording of costs but their reporting also. The classification of costs into fixed and variable components makes the. job of cost ascertainment easier. The main problem in this regard is only the segregation of the semi- variable cost into fixed and variable elements. However, this may be overcome by adopting any of the methods in this regard.

- ## COST CONTROL

Marginal cost statements can be understood easily by the management than those presented under absorption costing. Bifurcation of costs into fixed and variable enables management to exercise control over production cost and thereby affect efficiency. In fact while variable costs are controllable at the lower levels of management, fixed costs can be controlled at the top level. Under this technique, management can study tire behavior of costs at varying conditions of output and salts and thereby exercise batter control over costs.

- ## DECISION-MAKING

Modern management is faced with a number of decision-making problems every day. Profitability is the main criterion for selecting the best course of action. Marginal costing through contribution assists management in solving problems. Some of the decision-making problems that can be solved by marginal costing are: profit planning, pricing of products, make or buy decisions product mix etc.

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UNIT – V - Management Accounting – SBA1501

UNIT V

STANDARD COSTING AND VARIANCE ANALYSIS

Standard Costing and Variance Analysis: Meaning of Standard cost and Standard Costing - Steps involved in Standard Costing - Advantages and Limitations of Standard Costing - Variance analysis - Material Variances, Labour Variances.

INTRODUCTION

Financial Accounting is only historical costing and is only a post – marten examination of cost and hence, is not very much useful to management for cost control and cost reduction purposes. Besides this, historical costing is not useful to managerial decision making and policy formulating purposes. Hence, to the accounting world, a new concept (or) tool by name "Standard Costing" appeared as a very big way out.

CONCEPT OF STANDARD COSTING

Normally it is understood as a long step by step process of fixing standards, using standards, and their comparisons with the actuals, finding out of variances in between standards and actuals, analysing these variances, finding out of causative factors for these variances, classifying these causes into controllables and uncontrollables, controlling and taking remedial actions, revising these standards if necessary etc. Thus, it is a cost controlling and cost reducing device.

ICMA, London Defines "Standard Costing is the preparation and use of Standard costs, their comparison with actual costs and analysing of variances to their causes and points of incidence".

Controlling Process in standard Costing:

- **Formulation of Standard Costs :** For all elements of cost viz., Materials, Labour and Expenses, standard costs are fixed very much scientifically by experts based on multiple criteria.

- **Matching Actuals with Standards :** In this step, actual costs are compared with standard costs for the purposes of verifying whether actual cost is more or less than the standard costs.

- **Variances and Analysis thereof :** The difference between actual and the standard is known as variance and this is further analysed to find out whether variance is debit variance (or) Credit variance.

- **Analysis of causative factors for variances :** For all debit (or) unprofitable variances, causative factors (or) reasons responsible are unearthed and then are classified into controllable and uncontrollable reasons.

- **Corrective Measures :** In relation to controllable causes, the people responsible are held up and are instructed to take necessary remedial measures and see that they do not repeat in the time to come.

- **Reporting to Management :** Depending upon the degree of severity of the variances, information by following the principle of “Management by Exception”, will be reported to the concerned management level for necessary cost control measures.

- **Revising the standards :** With regard to uncontrollable variances, an idea of revising the standards watching the changed scenario, may be though of.

STANDARD COST

The whole of standard costing revolves around standard costs. Hence, we are very much obliged to explain what is standard cost. It is a predetermined cost computed in advance of production on the basis of specification of all factors affecting costs.

Blocker and Weltmer defines, Standard cost is a common sense cost reflecting the best Judgement of management as to what costs ought to be if this plant is operated with the highest degree of efficiency.

TYPES OF STANDARDS

Importantly, there are : Basic, current, Ideal, Expected and Normal standards.

- **Basic standards :** It is a standard set for a long term in an unaltered way. It is suitable mostly to those products whose costs / prices do not change much.
- **Current Standard :** It is a standard set for a relatively shorter period based on current market conditions. It claims to be more realistic and most companies use it.
- **Ideal Standard :** It is self explanatory as this is set based on all idealistic conditions which are never seen.
- **Expected Standard :** It is a standard set based on certain conditions which are expected to be attained. Conditions prevailing in industry and that are likely to hit the industry in future are all considered while this standard is set. So, it is attainable standard.
- **Normal Standard :** It is a standard set on the basis of average conditions (or) normal conditions. Since we do not have any control over future, this normal standard may not be of much use.

Process in setting Standards:

The function of setting standards for costs (or) revenues is a rational and professional job. Hence, it is entrusted to a committee called – standards Committee consisting of Production Manager, purchase manager, personnel Manager, Cost Accountants etc. This committee sets standards for each and every element of cost viz., Materials, Labour and expense. Let us see them separately.

Standard for Direct Material Cost: [SMC]

This SMC is a product of standard quantity and standard price. So, it is clear that standard quantity and standard price are to be determined first and SMC is obtained by multiplying these two. SMC is briefly called as SC (Standard Cost).

Standard Material Quantity [SMQ]:

SMQ is briefly called – Standard Quantity (SQ). Based on input – output relations, normal material losses as per are laboratory tests, SQ is determined.

Standard price [SP] :

SP is determined taking multiple criteria into account like : price of material in Stock, materials already contracted, future price trends, discounts etc. So, SC for material is the product of SQ and SP. Therefore SC = SQ x SP

Standard for Direct Labour Cost [SLC]

This resembles SMC in that it is a product of standard hours and standard rate.

 SLC = SH x SR

In this also, SH and SR are to be found out.

- **Standard Hours :** With the help of time and motion studies in a laboratory, work study job analysis, Normal idle time, Therbligs etc. standard time (or) Hours are fixed.

- **Standard Rate :** This is 2^{nd} aspect in finding SLC. It is fixed based on the past, going rates, consultations with Trade union, demand for labour, supply of labour etc.

Thus, the product of SH and SR gives SLC.

- **Standard for Expenses : [Overheads]** While we fix standards for expenses (or) overheads (OH) we need to go in three steps.

(1) Determination of total overhead

(2) Determination of production in units

(3) Calculation of standard overhead rate.

Sometime, for the entire overhead, a standard rate can be calculated. On the other hand, overhead can see split into fixed and variable overheads and separately, standard Overhead rates can be determined. The following formula can be used to calculate the overhead rate.

This rate can be calculated in hours also.

$$\text{Standard OH. Rate per unit} = \frac{\text{Total OH}}{\text{Budgeted output}}$$

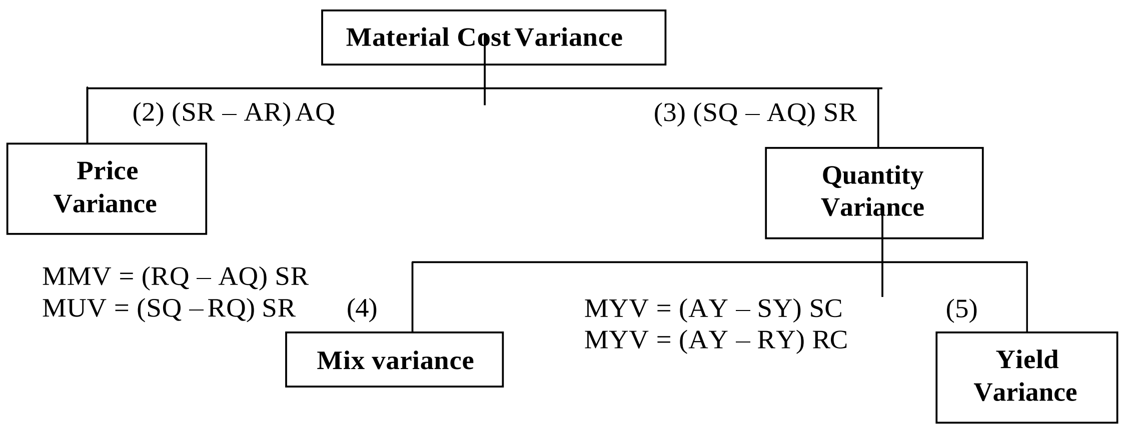
$$\text{Standard overhead rate per hour} = \frac{\text{Standard overhead Budgeted}}{\text{Hours in the period}}$$

VARIANCE ANALYSIS

This part is the most integral part of standard costing. The purposes of cost Accounting can be achieved by costing through variance analysis in standard costing. Variances are to be calculated for all the elements of cost viz., Materials, Labour and Expenses (or) overhead (OH). We now examine Material Variance Analysis in the first place. The following chat will explain it best.

MATERIAL VARIANCE ANALYSIS :

(1) (SQ x SR – AQ x AR)



(1) Material cost variance: This is the difference between standard cost of standard quantity for Actual output and actual cost of actual Material used for actual output. The formula for this is :

MCV = SC – AC = SQ x SR – AQ x AR

Where : SC = Standard cost, AC = Actual cost, SQ = SQ for AY, SR = Standard Rate, AQ = Actual Quantity, AR = Actual Rate.

Importantly, SQ = SQ for AY

Where AY = Actual Yield (or) Actual output.

(2) Material Price Variance: From the above chart, it is understood that 2nd variance is price variance and this will also lead to MCV. This is a part of the MCV and arises due to the difference in standard price set and the actual price paid.

The formula is :

MPV = (SR – AR) AQ where SR = Standard Rate, AR = Actual Rate and AQ = Actual Quantity of material.

(3) **Material quantity variance: (MQV)** It is also known as usage variance and it is a part of the MCV as per the above chart. This may arise due to any of the reasons viz., workers, quality of Materials, skill and efficiency of workers, changes in product design etc. Mostly, it arises due to the difference in utilisation of raw materials. Its formula is : MQV = (SQ – AQ) SR where SQ = SQ for AY, AQ = Actual Quantity, SR = Standard Rate, AY = Actual Yield.

(4) **Material mix variance [MMV]:** As per the chart of material variances, MMV is that portion of MQV due to changes in standard mix of materials and actual mix of the materials. It may be also due to subsequent shortage of raw materials. In this case, standard quantities are to be revised as per a formula and with these revised quantities the MMV is to be calculated. How do we revise the Quantity?

For the sake of convenience, MMV is discussed in a phased manner. Some assumptions are made here. In the 1st phase, the following are the assumptions.

(1) only mix ratio differs.

(2) Total weights of the mixes are the same

MMV in this case uses the same formula used for MQV.

Therefore, MMV = (SQ – AQ) SR

In the 2nd phase, the assumption are:

(1) Mix compositions differ.

(2) Total weights of the mixes are also different

MMV in this case is calculated with the following formula.

MMV = (RSQ – AQ) SR where:

RSQ = Revised Standard Quantity, AQ = Actual Quantity, SR = Standard Rate.

RSQ = Total weight of Actual Mix x old standard ratio.

Further, it is to be noted that MQV calculated as per the earlier said formula will be divided into two parts viz., (1) MMV (due to change in mix Ratio) and (2) MUV (due to efficiency (or) in efficiency in the utilization of materials).

So, MMV = (RSQ – AQ) SR and

MUV = (SQ – RSQ) SR

From the above it is to be noted that MQV must be equal to the total of MMV and MUV.

(5) Material yield variance (MYV) :

In all processing industries, material loss is inevitable. So, while setting standards for material and output from materials, a provision is made for normal loss while abnormal loss is not provided for. Though a provision is made for normal loss in the Standard, some difference is bound to arise between standard output for the actual input and the actual output. Hence, need for calculation of yield variance arises. Thus, there is difference between standard yield and actual yield because of efficiency (or) in efficiency of workers, poor quality of materials, etc. As per the material variances. Chart given above, it is 5^{th} variance which is a part of the MQV which is due to reasons said above. For the sake of convenience, it is sought to be handled in two situations. They are:

(1) *(a) Mix varies , (b) Weights do not vary.*

In the above case, the formula for MYV is MY = (AY – SY) SC, where: AY = Actual Yield, SY = Standard yield for actual input of material used, SC = Standard cost of unit.

(2) *(a) Mix Varies, (b) Weights also vary.*

In this case, since there is alround change standards set are to be revised and Revised Mix is to be calculated and Revised yield also is to be found out. The earlier yield variance formula is expressed now in Revised Terms. The formula is:

MY = (AY – RY) RC

SC (or) RC calculation:

It is standard cost per unit of finished goods. It is calculated as per the following:

$$SC\ (pu)\ (or)\ RC = \frac{\text{Total Standard cost}}{\text{Total input - Normal loss}} \quad \text{(OR)}$$

$$\frac{\text{Normal cost of Normal output}}{\text{Normal output}}$$

Verifications (or) checking:

(1) MCV = MPV + MQV

(2) MQV = Mix + Yield

(3) MQV = Mix + usage

(4) MQV = Mix + usage (or) yield

(5) MUV = MYU

DIRECT LABOUR COST VARIANCES

These variances are about the 2^{nd} element of cost, i.e. Labour. We get reminded of all material variance formula when we look at Labour variances. There is a lot of similarity. The first variance is Direct Labour Cost Variance (DLCV). This is difference between standard cost of labour and actual cost of labour. This is like MCV. Formula is given below:

DLCV = SC – AC = SH X SR – AH X AR

SC = Standard cost,

AC = Actual Cost,

SH = SH for actual output,

SR= Standard Rate,

AH = Actual Hours,

AR = Actual Rate.

1. Labour Rate Variance [LRV]:

This is just like Material Price Variance. This is part of the DLCV which is due to difference between standard wage rate and actual wage rate paid. Formula is:

LRV = (SR – AR) AH,

Where: SR = Standard Rate AR = Actual Rate, AH = Actual Hours.

2. Labour Time (or) Total Efficiency Variance : (LTV (or) LEV)

This is again like material quantity variance. This is post of DLCV which is due to difference in standard Hours for Actual output and Actual Hours. The relevant formula is:

LTV (or) LEV : (SH – AH) SR where:

SH = Standard Hours, AH = Actual Hours, SR = Standard Rate.

3. Labour Efficiency variance : (LEV)

(1) **Idle Time Variance :** As per the chart of labour variances, it is portion of the Labour Efficiency (or) Time variance. As there is material loss in the case of materials, there is problem of idle time is the case of Labour. This idle time is due to abnormal reasons viz., non – availability of raw materials, of special kind of labour, break down of Plant & Machinery etc. Formula is:

ITV = Abnormal Idle Hours x SR

Note: This is always adverse variance.

(2) **Labour Mix variance :** This is similar to material mix variance and all the formula of material mix variance can be used by using SH in the place of SQ and RSH (Revised standard hours) in the place of RSQ (or) RQ the relevant formula are :

(a) LMV = (RSH – AH) SR

(b) LUV = (SH – RSH) SR

From the above it can be understood that the total Labour Efficiency (or) Time variance is a sum of (1) Idle Time variance, (2) Mix variance and (3) usage variance. When LUV is calculated in Labour time variance, there is no need to specially calculate Labour yield variance as it is very much equal to LYU.

(3) **Labour yield variance :** This is very much similar to MYV. The formula are :

(1) LYU = (AY – SY) SC

(2) LYU = (AY – RY) RC

SC – AC = SH x SR – AH x AR

Direct Labour Cost Variance

(SR – AR) AH

Rate Variance

(SH – AH) SR

Total Efficiency (or) Time Variance

Idle Hrs x HR

Idle Time Variance

[SH – [AH – IT Hrs] SR]

Efficiency Variance

4. Labour Efficiency Variance : [LEV]

As per the chart, this is part of Total Efficiency variance. When we seek to calculate the real efficiency variance, from out of total Hrs. actually worked, Idle Hours lost due to abnormal condition shall be set aside and with these actual hours, efficiency variance is to be calculated. The formula is:

LEV = [SH – (AH – Idle Hours)] SR

(SH – AH) SR

When there is mix = Total Efficiency Variance =

(AY – SY) SC

(or)

Idle Hrs. x SR (RH – AH) SR (SH – RH) SR (AY – RY) RC

Idle Time Variance + Mix Variance + Usage Variance (or) Yield Variance

TLEV = Idle + Mix + Usage (or) Yield

1. Denotes Total Actual Hours worked including idle Time Hours.

Verifications:

(1) LCV = Rate + Total Time (or) Total Efficiency.

(2) Total Efficiency Variance = Idle Time + Efficiency.

(3) Total Efficiency Variance = Idle + Mix + usage (or) Yield

(4) Usage = Yield.

Advantages of Standard Costing:

In the areas of Accounting, Cost Accounting and Management Accounting, Standard Costing enjoys a significant place in acting as a cost controlling and cost reducing managerial tool. The utility of standard costing is unlimited. The following are some important merits.

1. **Application of "Management by Exception" principle:** here is no need to waste away the most significant time of Top management with negligible and inappropriate things in controlling. With the help of variance analysis, attention of the Management towards exceptional areas of performance may be drawn and accordingly, they may be contained. Management by Exception principle says that only exceptional aspect needs to be reported to the most right level of management.
2. **Optimum utilisation of Resources:** Because of the cost consciousness developed in the minds of people in the organisation, people tend to make the best utilisation of all scarce resources for the maximisation of profits and minimisation of costs.
3. **People are motivated:** Since standards are set with the involvement and participation of lower level people also, they are very much motivated to accomplish the standards that they also set, along with higher ups in the organisation.
4. **Most Important Managerial Tool of Cost control / Cost Reduction:** There are several tools and techniques to control costs and performance aspects. Among all these tools, standard costing is a significant tool to control and reduce costs.
5. **Weak sports un earthed:** The efficient and inefficient areas of working in the

entire organisation are revealed by the variance analysis. Accordingly, remedial action can be planned.

6. **Valuation of Inventory at Standard Rates:** Since stocks can be valued at standard costs, this will reduce fluctuation of profits due to adoption of different methods for stock valuation.

Disadvantages of Standard Costing:

- Setting standards itself is the most difficult task.
- Categorising the causes for variances into controllable and un controllable itself is another difficult barrier.
- Standard costing is not very much suitable to those industries which are exposed to constant changes in the market.
- Standards set once are never revised as per the changed scenario and hence, they may prove to be of no use.
- It is a costly and time-consuming tool.
- Employees resist the new life style in the organisation, because of standard costing.
- Not very much suitable to small and medium sized organisations.

In spite these problems (or) criticisms, standard costing has got its own value and no limitations can stand against the utility of standard costing.