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STUDY MATERIAL

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Financial Management

Definition:

One needs money to make money. Finance is the life-blood of business and there must be a continuous flow of funds in and out of a business enterprise. Money makes the wheels of business run smoothly. Sound plans, efficient production system and excellent marketing network are all hampered in the absence of an adequate and timely supply of funds.

Sound financial management is as important in business as production and marketing. A business firm requires finance to commence its operations, to continue operations and for expansion or growth. Finance is, therefore, an important operative function of business.

A large business firm has to raise funds from several sources and has to utilise those funds in alternative investment opportunities. In order to ensure the most judicious utilisation of funds and to provide a reasonable rate of return on the investment, sound financial policies and programmes are required. Unwise financing can drive a business into bankruptcy just as easily as a poor product, inept marketing or high production costs.

On the other hand, adequate and economical financing can provide the firm a differential advantage in the market place. The success of a business enterprise is largely determined by the way its capital funds are raised, utilised and disbursed. In the modern money-using economy, the importance of finance has increased further due to increasing scale of operations and capital intensive techniques of production and distribution.

In fact, finance is the bright thread running through all business activity. It influences and limits the activities of marketing, production, purchasing and personnel management. The success of a business is measured largely in financial terms. The efficient organisation and administration of the finance function is thus vital to the successful functioning of every business enterprise.

Meaning of Financial Management:

Financial management may be defined as planning, organising, directing and controlling the financial activities of an organisation. According to Guthman and Dougal, financial management means, "the activity concerned with the planning, raising, controlling and administering of funds used in the business." It is concerned with the procurement and utilisation of funds in the proper manner.

Financial activities deal with not only the procurement and utilisation of funds but also with the assessing of needs for funds, raising required finance, capital budgeting, distribution of surplus, financial controls, etc.

Ezra Solomon has described the nature of financial management as follows: "Financial management is properly viewed as an integral part of overall management rather than as a staff specially concerned with funds raising operations.

In this broader view, the central issue of financial policy is the wise use of funds and the central process involved is a rational matching of the advantage of potential uses against the cost of alternative potential sources so as to achieve the broad financial goals which an enterprise sets for itself.

In addition to raising funds, financial management is directly concerned with production, marketing and other functions within an enterprise whenever decisions are made about the acquisition or distribution of funds."

Objectives of Financial Management:

Financial management is one of the functional areas of business. Therefore, its objectives must be consistent with the overall objectives of business. The overall objective of financial management is to provide maximum return to the owners on their investment in the long-term.This is known as wealth maximisation. Maximisation of owners' wealth is possible when the capital invested initially increases over a period of time. Wealth maximisation means maximising the market value of investment in shares of the company.

Wealth of shareholders = Number of shares held ×Market price per share.

In order to maximise wealth, financial management must achieve the following specific objectives:

(a) To ensure availability of sufficient funds at reasonable cost (liquidity).

(b) To ensure effective utilisation of funds (financial control).

(c) To ensure safety of funds by creating reserves, re-investing profits, etc. (minimisation of risk).

(d) To ensure adequate return on investment (profitability).

(e) To generate and build-up surplus for expansion and growth (growth).

(f) To minimise cost of capital by developing a sound and economical combination of corporate securities (economy).

(g) To coordinate the activities of the finance department with the activities of other departments of the firm (cooperation).

Profit Maximization:

Very often maximization of profits is considered to be the main objective of financial management. Profitability is an operational concept that signifies economic efficiency. Some writers on finance believe that it leads to efficient allocation of resources and optimum use of capital.

It is said that profit maximization is a simple and straightforward objective. It also ensures the survival and growth of a business firm. But modern authors on financial management have criticized the goal of profit maximization.

Ezra Solomon has raised the following objections against the profit maximization objective:

Objections against the Profit Maximization Objectives:

(i) The concept is ambiguous or vague. It is amenable to different interpretations, e.g., long run profits, short run profits, volume of profits, rate of profit, etc.

(ii) It ignores the timing of returns. It is based on the assumption of bigger the better and does not take into account the time value of money. The value of benefits received today and those received a year later are not the same.

(iii) It ignores the quality of the expected benefits or the risk involved in prospective earnings stream. The streams of benefits may have varying degrees of uncertainty. Two projects may have same total expected earnings but if the earnings of one fluctuate less widely than those of the other it will be less risky and more preferable. More uncertain or fluctuating the expected earnings, lower is their quality.

(iv) It does not consider the effect of dividend policy on the market price of the share. The goal of profit maximization implies maximizing earnings per share which is not necessarily the same as maximizing market-price share. According to Solomon, “to the extent payment of dividends can affect the market price of “the stock (or share), the maximization of earnings per share will not be a satisfactory objective by itself.”

(v) Profit maximization objective does not take into consideration the social responsibilities of business. It ignores the interests of workers, consumers, government and the public in general. The exclusive attention on profit maximization may misguide managers to the point where they

may endanger the survival of the firm by ignoring research, executive development and other intangible investments.

Wealth Maximization:

Prof. Ezra Solomon has advocated wealth maximization as the goal of financial decision-making. Wealth maximization or net present worth maximization is defined as follows: "The gross present worth of a course of action is equal to the capitalized value of the flow of future expected benefits, discounted (or as capitalized) at a rate which reflects their certainty or uncertainty.

Wealth or net present worth is the difference between gross present worth and the amount of capital investment required to achieve the benefits being discussed. Any financial action which creates wealth or which has a net present worth above zero is a desirable one and should be undertaken.

Any financial action which does not meet this test should be rejected. If two or more desirable courses of action are mutually exclusive (i.e., if only one can be undertaken), then the decision should be to do that which creates most wealth or shows the greatest amount of net present worth. In short, the operating objective for financial management is to maximize wealth or net present worth."

Wealth maximization is more operationally viable and valid criterion because of the following reasons:

(a) It is a precise and unambiguous concept. The wealth maximization means maximizing the market value of shares.

(b) It takes into account both the quantity and quality of the expected steam of future benefits. Adjustments are made for risk (uncertainty of expected returns) and timing (time value of money) by discounting the cash flows,

(c) As a decision criterion, wealth maximization involves a comparison of value of cost. It is a long-term strategy emphasizing the use of resources to yield economic values higher than joint values of inputs.

(d) Wealth maximization is not in conflict with the other motives like maximization of sales or market share. It rather helps in the achievement of these other objectives. In fact, achievement of wealth maximization also maximizes the achievement of the other objectives. Therefore, maximization of wealth is the operating objective by which financial decisions should be guided.

The above description reveals that wealth maximization is more useful if objective than profit maximization. It views profits from the long-term perspective. The true index of the value of a firm is the market price of its shares as it reflects the influence of all such factors as earnings per share, timing of earnings, risk involved, etc.

Thus, the wealth maximization objective implies that the objective of financial management should be to maximize the market price of the company's shares in the long-term. It is a true indicator of the company's progress and the shareholder's wealth.

However, "profit maximization can be part of a wealth maximization strategy. Quite often the two objectives can be pursued simultaneously but the maximization of profits should never be permitted to overshadow the broader objectives of wealth maximization.

Functions of Financial Management

1. **Estimation of capital requirements:** A finance manager has to make estimation with regards to capital requirements of the company. This will depend upon expected costs and profits and future programmes and policies of a concern. Estimations have to be made in an adequate manner which increases earning capacity of enterprise.
2. **Determination of capital composition:** Once the estimation have been made, the capital structure have to be decided. This involves short- term and long- term debt equity analysis. This will depend upon the proportion of equity capital a company is possessing and additional funds which have to be raised from outside parties.
3. **Choice of sources of funds:** For additional funds to be procured, a company has many choices like-
    a. Issue of shares and debentures
    b. Loans to be taken from banks and financial institutions
    c. Public deposits to be drawn like in form of bonds.

Choice of factor will depend on relative merits and demerits of each source and period of financing.

4. **Investment of funds:** The finance manager has to decide to allocate funds into profitable ventures so that there is safety on investment and regular returns is possible.
5. **Disposal of surplus:** The net profits decision have to be made by the finance manager. This can be done in two ways:

a. Dividend declaration - It includes identifying the rate of dividends and other benefits like bonus.
b. Retained profits - The volume has to be decided which will depend upon expansional, innovational, diversification plans of the company.

6. **Management of cash:** Finance manager has to make decisions with regards to cash management. Cash is required for many purposes like payment of wages and salaries, payment of electricity and water bills, payment to creditors, meeting current liabilities, maintainance of enough stock, purchase of raw materials, etc.
7. **Financial controls:** The finance manager has not only to plan, procure and utilize the funds but he also has to exercise control over finances. This can be done through many techniques like ratio analysis, financial forecasting, cost and profit control, etc

Scope of Financial Management

The introduction to financial management also requires you to understand the scope of financial management. It is important that financial decisions take care of the shareholders' interests.

Further, they are upheld by the maximization of the wealth of the shareholders, which depends on the increase in net worth, capital invested in the business, and plowed-back profits for the growth and prosperity of the organization.

The scope of financial management is explained in the diagram below:

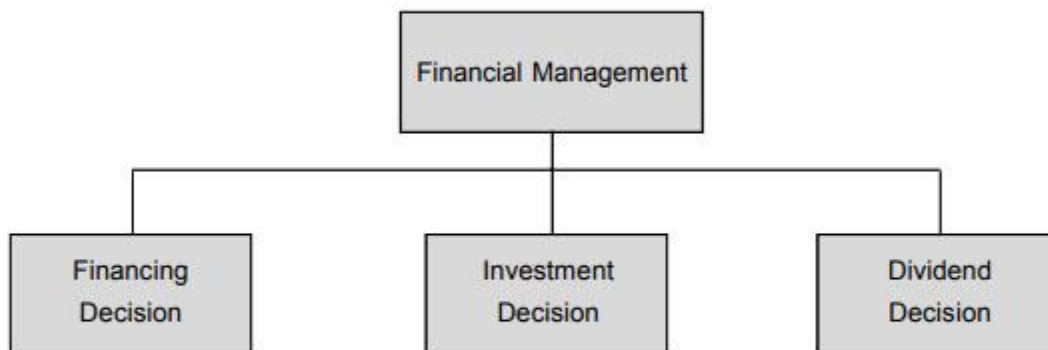

Fig. 1 - The scope of Financial Management

You can understand the nature of financial management by studying the nature of investment, financing, and dividend decisions.

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Core Financial Management Decisions

In organizations, managers in an effort to minimize the costs of procuring finance and using it in the most profitable manner, take the following decisions:

Investment Decisions: Managers need to decide on the amount of investment available out of the existing finance, on a long-term and short-term basis. They are of two types:

- Long-term investment decisions or Capital Budgeting mean committing funds for a long period of time like fixed assets. These decisions are irreversible and usually include the ones pertaining to investing in a building and/or land, acquiring new plants/machinery or replacing the old ones, etc. These decisions determine the financial pursuits and performance of a business.
- Short-term investment decisions or Working Capital Management means committing funds for a short period of time like current assets. These involve decisions pertaining to the investment of funds in the inventory, cash, bank deposits, and other short-term investments. They directly affect the liquidity and performance of the business.

Financing Decisions: Managers also make decisions pertaining to raising finance from long-term sources (called Capital Structure) and short-term sources (called Working Capital). They are of two types:

- **Financial Planning decisions** which relate to estimating the sources and application of funds. It means pre-estimating financial needs of an organization to ensure the availability of adequate finance. The primary objective of financial planning is to plan and ensure that the funds are available as and when required.
- **Capital Structure decisions** which involve identifying sources of funds. They also involve decisions with respect to choosing external sources like issuing shares, bonds, borrowing from banks or internal sources like retained earnings for raising funds.

Dividend Decisions: These involve decisions related to the portion of profits that will be distributed as dividend. Shareholders always demand a higher dividend, while the management would want to retain profits for business needs. Hence, this is a complex managerial decision.

Financing Decision

Definition: The **Financing Decision** is yet another crucial decision made by the financial manager relating to the financing-mix of an organization. It is concerned with the borrowing and allocation of funds required for the investment decisions.

The financing decision involves two sources from where the funds can be raised: using a company's own money, such as share capital, retained earnings or borrowing funds from the outside in the form debenture, loan, bond, etc. The objective of financial decision is to maintain an **optimum capital structure,** i.e. a proper mix of debt and equity, to ensure the trade-off between the risk and return to the shareholders.

The **Debt-Equity Ratio** helps in determining the effectiveness of the financing decision made by the company. While taking the financial decisions, the finance manager has to take the following points into consideration:

- The **Risk** involved in raising the funds. The risk is higher in the case of debt as compared to the equity.
- The **Cost** involved in raising the funds. The manager chose the source with minimum cost.
- The **Level of Control**, the shareholders, want in the organization also determines the composition of capital structure. They usually prefer the borrowed funds since it does not dilute the ownership.
- The **Cash Flow** from the operations of the business also determines the source from where the funds shall be raised. High cash flow enables to borrow debt as interest can be easily paid.
- The **Floatation Cost** such as broker's commission, underwriters fee, involved in raising the securities also determines the source of fund. Thus, securities with minimum cost must be chosen.

Thus, a company should make a judicious decision regarding from where, when, how the funds shall be raised, since, more use of equity will result in the dilution of ownership and whereas, higher debt results in higher risk, as fixed cost in the form of interest is to be paid on the borrowed funds.

Functions of Financial Manager

The functions / scope of financial manager are divided in two parts viz primary / executive functions and subsidiary functions.

A. Primary / Executive Functions:

1. Determining Financial Needs:

The most important function of the financial manager is to ensure the availability of adequate financing. Financial needs have to be assessed for different purposes. Money may be required for initial promotional expenses, fixed capital and working capital needs. Promotional expenditure includes expenditure incurred in the process of company formation.

Fixed asset needs depend upon the nature of the business enterprise-whether it is a manufacturing, non-manufacturing or merchandising enterprise. Current asset needs depend upon the size of the working capital required by an enterprise.

2. Determining Sources of Funds:

The financial manager has to decide the sources of funds. He may issue different types of securities. He may borrow funds from a number of financial institutions and the public.

When a firm is new and small and little known in financial circles, the financial manager faces a great challenge in raising funds. Even when he has a choice in selecting the sources of funds, that choice should be exercised with great care and caution.

3. Financial Analysis:

The financial manager has to interpret different financial statements. He has to use a large number of ratios to analyze the financial status and activities of his firm. He is required to measure its liquidity, determine its profitability, and assess overall performance in financial terms.

This is often a challenging task, because he must understand the importance of each one of the aspects of the firm, and he should be crystal clear in his mind about the purposes for which liquidity, profitability and performance are to be measured.

4. Capital Structure:

The financial manager has to establish capital structure and ensure the maximum rate of return on investment. The ratio between equity and other liabilities carrying fixed charges has to be defined. In the process, he has to consider the operating and financial leverages of his firm.

The operating leverage exists because of operating expenses, while the financial leverage exists because of the amount of debt involved in the firm’s capital structure. The financial manager

should have adequate knowledge of the different empirical studies on the optimum capital structure and find out whether and to what extent he can apply their findings to the advantage of the firm.

5. Cost-Volume-Profit Analysis:

This is popularly known as the "CVP relationship". For this purpose, fixed costs, variable costs and semi-variable costs have to be analyzed. Fixed costs are more or less constant for varying sales volumes. Variable costs vary according to the sales volume. Semi-variable costs are either fixed or variable in the short run.

The financial manager has to ensure that the income of the firm will cover its variable costs. Moreover, a firm will have to generate an adequate income to cover its fixed costs as well.

The financial manager has to find out the break-even point that is, the point at which the total costs is matched by total sales or total revenue. He has to try to shift the activity of the firm as far as possible from the breakeven point to ensure the company's survival against seasonal functions.

6. Profit Planning and Control:

Profit planning is an important responsibility of the financial manager. Profit is the surplus which accrues to a firm after its total expenses are deducted from its total revenue.

It is necessary to determine profits properly for the measure of the economic viability of a business. The revenue may be from sales or it may be operating revenue, or income from other sources.

The expenditure may include manufacturing costs, trading costs, selling costs, general administrative costs and finance costs. Profit planning and control is a dual function which enables a management to determine the costs it has incurred, and revenues it has earned during a particular period and provides shareholders and potential investors with information about the earning strength of the corporation.

Profit planning and Control directly influence the declaration of dividend, creation of surpluses, taxation etc. Break-even analysis and cost volume profits are some of the tools used in profit planning and control.

7. Fixed Assets Management:

Fixed assets are land, building, machinery and equipment, furniture and intangibles as patents, copyrights, goodwill, etc. The acquisition of fixed assets involves capital expenditure decisions

and long-term commitment of funds. These fixed assets are justified to the extent of their utility and/or their productive capacity.

Long-term commitment of funds, the decisions governing their purchase, replacement, etc. should be taken with great care and caution. Often, these fixed assets are financed by issuing stock, debentures, long-term borrowings and deposits from the public. When it is not worthwhile to purchase fixed assets, the financial manager may lease them and use the assets on a rental basis.

8. Project Planning and Evaluation:

A substantial portion of the initial capital is the long-term assets of a firm. The error of judgment in project planning and evaluation should be minimized. Decisions are taken on the basis of feasibility and project reports containing economic, commercial, technical, financial and organizational aspects.

The essentiality of a project is ensured by a technical analysis. The economic and commercial analysis studies the demand position for the product. The economy of price, the choice of technology and the availability of the factors favoring a particular industrial site are all considerations which merit attention in a technical analysis.

The financial analysis is perhaps the most important and includes a forecast of the cash inflows and the total outlay which will keep down the cost of capital and maximize the rate of return on investment.

9. Capital Budgeting:

Capital budgeting decisions are most crucial for these have long-term implications. These relate to a judicious allocation of capital. Current funds have to be invested in long-term activities in anticipation of an expected flow of future benefits spread over a long period of time.

Capital budgeting forecasts returns on proposed long-term investments and compares the profitability of different investments and their cost of capital. It results in capital expenditure investments. The various proposals are ranked on the basis of such criteria as urgency, liquidity, profitability and risk sensitivity.

The financial analyzer should be thoroughly familiar with such financial techniques as pay back, internal rate of return, discounted cash flow and net present value among others because risk increases when investment is stretched over a long period of time.

10. Working Capital Management:

Working capital refers to that part of firm’s capital which is required for financing short term or current assets such as cash, receivables and inventories. It is essential to maintain proper level of these assets. Financial manager is required to determine the quantum of such assets.

11. Dividend Policies:

Dividend policies constitute a crucial area of financial management. While owners are interested in getting the highest dividend from a corporation, the Board of Directors may be interested in maintaining its financial health by retaining the surplus to be used when contingencies, if any arise. A firm may try to improve its internal financing so that it may avail itself the benefits of future expansion.

However, the interests of a firm and its stockholders are complementary, for the financial management is interested in maximizing the value of the firm and the real interest of the stockholders always lies in the maximization of this value of the firm; and this is the ultimate goal of financial management.

The dividend policy, of a firm depends on a number of financial considerations, the most critical among them being profitability. Thus, there are different dividend policy patterns which a firm may choose to adopt, depending upon their suitability for the firm and its stockholders’ group.

12. Acquisitions and Mergers:

Firms may expand externally through co-operative arrangements, by acquiring other concerns or by entering into mergers. Acquisitions consist of either the purchase or lease of a smaller firm by a bigger organization.

Mergers may be accomplished with a minimum cash outlay, though these involve major problems of valuation and control. The process of valuing a firm and its securities is difficult, complex and prone to errors. The financial manager should, therefore, go through the valuation process very carefully.

B. Subsidiaries Functions:

The subsidiary functions of financial management are as follows:

i. Liquidity Function

ii. Profitability Function

iii. Evaluation of Financial Performance

iv. Co-ordination with other departments

These said functions focus on Cash Management, Maximization of profit (Profitability), of financial performance and Coordination with other Departments.

Financial Statement Analysis

Introduction

The analysis of financial statements involves gaining an understanding of the financial situation of an organization by reviewing the organization's financial statements. You can use three key financial statements – Income statement, Balance sheet and statement of cash flows. Analysis of these financial statements is often reported to the board of directors and senior management. They use this information as input in their decision-making process. External parties such as regulatory bodies and investors also use this analysis for gaining insight into the organization.

Financial Analysis: Meaning and Objective

Analysis and Interpretation of financial statements refers to the process of determining the significant operating and financial characteristics from the accounting data with a view to getting an insight into the activities of an enterprise.

Myers defines:

"Financial Statement analysis is largely a study of relationship among the various financial factors in a business as disclosed by a single set of statements, and a study of the trend of these factors as shown in a series of statements".

By establishing a strategic relationship between the items of a balance sheet and income statement and other operative data, the financial analysis [as -it is simply called] explains the meaning and significance of such items.

The terms 'analysis' and 'interpretation' are complimentary to each other, though sometimes they are used distinctively.

While analysis is used to mean the simplification of data by methodical classification of data given in the financial statements, the term interpretation means explaining the meaning and significance of the data so simplified. However, analysis is useless without interpretation, and interpretation becomes difficult without analysis.

Hence, as the objective of analysis is to study the relationship among the various items of financial statements by interpretation, many to cover both analysis and interpretation together use it.

Objectives and Importance of Financial Statement Analysis:

The primary objective of financial statement analysis is to understand and diagnose the information contained in financial statement with a view to judge the profitability and financial soundness of the firm, and to make forecast about future prospects of the firm. The purpose of analysis depends upon the person interested in such analysis and his object.

However, the following purposes or objectives of financial statements analysis may be stated to bring out the significance of such analysis:

(i) To assess the earning capacity or profitability of the firm.

(ii) To assess the operational efficiency and managerial effectiveness.

(iii) To assess the short term as well as long term solvency position of the firm.

(iv) To identify the reasons for change in profitability and financial position of the firm.

(v) To make inter-firm comparison.

(vi) To make forecasts about future prospects of the firm.

(vii) To assess the progress of the firm over a period of time.

(viii) To help in decision making and control.

(ix) To guide or determine the dividend action.

(x) To provide important information for granting credit.

Parties Interested in Financial Analysis:

The following parties are interested in the analysis of financial statements:

(1) Investors or potential investors.

(2) Management.

(3) Creditors or suppliers.

(4) Bankers and financial institutions.

(5) Employees.

(6) Government.

(7) Trade associations.

(8) Stock exchanges.

(9) Economists and researchers.

(10) Taxation authorities

Limitations of Financial Statement Analysis:

Financial analysis is a powerful mechanism of determining financial strengths and weaknesses of a firm. But, the analysis is based on the information available in the financial statements. Thus, the financial analysis suffers from serious inherent limitations of financial statements.

The financial analyst has also to be careful about the impact of price level changes, window-dressing of financial statements, changes in accounting policies of a firm, accounting concepts and conventions, and personal judgment , etc.

Some of the important limitations of financial analysis are, however, summed up as below:

(i) It is only a study of interim reports

(ii) Financial analysis is based upon only monetary information and non-monetary factors are ignored.

(iii) It does not consider changes in price levels.

(iv) As the financial statements are prepared on the basis of a going concern, it does not give exact position. Thus accounting concepts and conventions cause a serious limitation to financial analysis.

(v) Changes in accounting procedure by a firm may often make financial analysis misleading.

(vi) Analysis is only a means and not an end in itself. The analyst has to make interpretation and draw his own conclusions. Different people may interpret the same analysis in different ways.

Types of Financial Analysis

The following points highlight the four important types of financial analysis, i.e, (1) On the Basis of Material Used, and (2) On the Basis of Modus Operandi, (3) On the Basis of Entities Involved, and (4) On the Basis of Time Horizon or Objective of Analysis.

Financial Analysis Type # 1. On the Basis of Material Used:

According to material used, financial analysis can be of two types:

(a) External analysis, and

(b) Internal analysis.

(a) External Analysis:

This analysis is done by outsiders who do not have access to the detailed internal accounting records of the business firm. These outsiders include investors, potential investors, creditors, potential creditors, government agencies, credit agencies, and the general public.

For financial analysis, these external parties to the firm depend almost entirely on the published financial statements. External analysis, thus serves only a limited purpose. However, the recent changes in the government regulations requiring business firms to make available more detailed information to the public through audited published accounts have considerably improved the position of the external analysis.

(b) Internal Analysis:

The analysis conducted by persons who have access to the internal accounting records of a business firm is known as internal analysis. Such an analysis can, therefore, be performed by executives and employees of the organisation as well as government agencies which have statutory powers vested in them. Financial analysis for managerial purposes is the internal type of analysis that can be effected depending upon the purpose to be achieved.

Financial Analysis Type # 2. On the Basis of Modus Operandi:

According to the method of operation followed in the analysis, financial analysis can also be of two types:

(a) Horizontal analysis and

(b) Vertical analysis.

(a) Horizontal Analysis:

Horizontal analysis refers to the comparison of financial data of a company for several years. The figures for this type of analysis are presented horizontally over a number of columns. The figures of the various years are compared with standard or base year. A base year is a year chosen as beginning point.

This type of analysis is also called ‘ Dynamic Analysis’ as it is based on the data from year to year rather than on data of any one year. The horizontal analysis makes it possible to focus attention on items that have changed significantly during the period under review. Comparison of an item over several periods with a base year may show a trend developing. Comparative statements and trend percentages are two tools employed in horizontal analysis.

(b) Vertical Analysis:

Vertical analysis refers to the study of relationship of the various items in the financial statements of one accounting period. In this types of analysis the figures from financial statement of a year are compared with a base selected from the same year's statement.

It is also known as 'Static Analysis'. Common-size financial statements and financial ratios are the two tools employed in vertical analysis. Since vertical analysis considers data for one time period only, it is not very conducive to a proper analysis of financial statements. However, it may be used along with horizontal analysis to make it more effective and meaningful.

In addition to the above primary classification of financial analysis, the following other types of financial analysis are also discussed:

Financial Analysis Type # 3. On the Basis of Entities Involved:

On the basis of entities involved in the analysis, financial analysis can also be of two types:

(a) Cross sectional or inter-firm analysis, and

(b) Time series or intra-firm analysis.

(a) Cross Sectional or Inter-firm Analysis:

Cross sectional analysis involves comparison of financial data of a firm with other firms (competitors) or industry averages for the same time period.

(b) Time Series or Intra-firm Analysis:

Time series analysis involves the study of performance of the same firm over a period of time.

Financial Analysis Type # 4. On the Basis of Time Horizon or Objective of Analysis:

On the basis of time horizon, financial analysis can be classified under two categories:

(a) Short-term analysis, and

(b) Long-term analysis.

(a) Short-term Analysis:

Short-term analysis measures the liquidity position of a firm, i.e. the short- term paying capacity of a firm or the firm's ability to meet its current obligations.

(b) Long-term Analysis:

Long-term analysis involves the study of firm's ability to meet the interest costs and repayment schedules of its long-term obligations. The solvency, stability and profitability are measured under this type of analysis.

Tools or Techniques of Financial Statement Analysis

Important tools or techniques of financial statement analysis are as follows.

1. Comparative Statement or Comparative Financial and Operating Statements.
2. Common Size Statements.
3. Trend Ratios or Trend Analysis.
4. Average Analysis.
5. Statement of Changes in Working Capital.
6. Fund Flow Analysis.
7. Cash Flow Analysis.
8. Ratio Analysis.
9. Cost Volume Profit Analysis

A brief explanation of the tools or techniques of financial statement analysis presented below.

1. Comparative Statements

Comparative statements deal with the comparison of different items of the Profit and Loss Account and Balance Sheets of two or more periods. Separate comparative statements are prepared for Profit and Loss Account as Comparative Income Statement and for Balance Sheets.

As a rule, any financial statement can be presented in the form of comparative statement such as comparative balance sheet, comparative profit and loss account, comparative cost of production statement, comparative statement of working capital and the like.

2. Comparative Income Statement

Three important information are obtained from the Comparative Income Statement. They are Gross Profit, Operating Profit and Net Profit. The changes or the improvement in the profitability of the business concern is find out over a period of time. If the changes or improvement is not satisfactory, the management can find out the reasons for it and some corrective action can be taken.

3. Comparative Balance Sheet

The financial condition of the business concern can be find out by preparing comparative balance sheet. The various items of Balance sheet for two different periods are used. The assets are classified as current assets and fixed assets for comparison. Likewise, the liabilities are classified as current liabilities, long term liabilities and shareholders’ net worth. The term shareholders’ net worth includes Equity Share Capital, Preference Share Capital, Reserves and Surplus and the like.

4. Common Size Statements

A vertical presentation of financial information is followed for preparing common-size statements. Besides, the rupee value of financial statement contents are not taken into consideration. But, only percentage is considered for preparing common size statement.

The total assets or total liabilities or sales is taken as 100 and the balance items are compared to the total assets, total liabilities or sales in terms of percentage. Thus, a common size statement shows the relation of each component to the whole. Separate common size statement is prepared for profit and loss account as Common Size Income Statement and for balance sheet as Common Size Balance Sheet.

5. Trend Analysis

The ratios of different items for various periods are find out and then compared under this analysis. The analysis of the ratios over a period of years gives an idea of whether the business concern is trending upward or downward. This analysis is otherwise called as ***Pyramid Method***.

6. Average Analysis

Whenever, the trend ratios are calculated for a business concern, such ratios are compared with industry average. These both trends can be presented on the graph paper also in the shape of curves. This presentation of facts in the shape of pictures makes the analysis and comparison more comprehensive and impressive.

7. Statement of Changes in Working Capital

The extent of increase or decrease of working capital is identified by preparing the statement of changes in working capital. The amount of net working capital is calculated by subtracting the sum of current liabilities from the sum of current assets. It does not detail the reasons for changes in working capital.

8. Fund Flow Analysis

Fund flow analysis deals with detailed sources and application of funds of the business concern for a specific period. It indicates where funds come from and how they are used during the period under review. It highlights the changes in the financial structure of the company.

9. Cash Flow Analysis

Cash flow analysis is based on the movement of cash and bank balances. In other words, the movement of cash instead of movement of working capital would be considered in the cash flow analysis. There are two types of cash flows. They are actual cash flows and notional cash flows.

10. Ratio Analysis

Ratio analysis is an attempt of developing meaningful relationship between individual items (or group of items) in the balance sheet or profit and loss account. Ratio analysis is not only useful to internal parties of business concern but also useful to external parties. Ratio analysis highlights the liquidity, solvency, profitability and capital gearing.

11. Cost Volume Profit Analysis

This analysis discloses the prevailing relationship among sales, cost and profit. The cost is divided into two. They are fixed cost and variable cost. There is a constant relationship between sales and variable cost. Cost analysis enables the management for better profit planning.

COMPARATIVE STATEMENTS

Meaning of Comparative Statements:

The comparative financial statements are statements of the financial position at different periods; of time. The elements of financial position are shown in a comparative form so as to give an idea of financial position at two or more periods. Any statement prepared in a comparative form will be covered in comparative statements.

From practical point of view, generally, two financial statements (balance sheet and income statement) are prepared in comparative form for financial analysis purposes. Not only the comparison of the figures of two periods but also be relationship between balance sheet and income statement enables an in depth study of financial position and operative results.

The comparative statement may show:

(i) Absolute figures (rupee amounts).

(ii) Changes in absolute figures i.e., increase or decrease in absolute figures.

(iii) Absolute data in terms of percentages.

(iv) Increase or decrease in terms of percentages.

The analyst is able to draw useful conclusions when figures are given in a comparative position. The figures of sales for a quarter, half -year or one year may tell only the present position of sales efforts. When sales figures of previous periods are given along with the figures of current periods then the analyst will be able to study the trends of sales over different periods

of time. Similarly, comparative figures will indicate the trend and direction of financial position and operating results.

The financial data will be comparative only when same accounting principles are used in preparing these statements. In case of any deviation in the use of accounting principles this fact must be mentioned at the foot of financial statements and the analyst should be careful in using these statements.

Types of Comparative Statements:

The two comparative statements are

(i) Balance sheet, and

(ii) Income statement.

(i) Comparative Balance Sheet:

The comparative balance sheet analysis is the study of the trend of the same items, group of items and computed items in two or more balance sheets of the same business enterprise on different dates.' The changes in periodic balance sheet items reflect the conduct of a business.

The changes can be observed by comparison of the balance sheet at the beginning and at the end of a period and these changes can help in forming an opinion about the progress of an enterprise. The comparative balance sheet has two columns for the data of original balance sheets. A third column is used to show increases in figures. The fourth column may be added for giving percentages of increases or decreases.

Guidelines for Interpretation of Comparative Balance Sheet:

While interpreting Comparative Balance Sheet the interpreter is expected to study the following aspects:

(1) Current financial position and liquidity position.

(2) Long -term financial position.

(3) Profitability of the concern.

(1) For studying current financial position or short -term financial position of a concern, one should see the working capital in both the years. The excess of current assets over current liabilities will give the figures of working capital. The increase in working capital will mean improvement in the current financial position of the business.

An increase in current assets is accompanied by the increase in current liabilities of the same amount will not show any improvement in the short-term financial position. A student should

study the increase or decrease in current assets and current liabilities and this will enable him to analyze the current financial position.

The second aspect which should be studied in current financial position is the liquidity position of the concern. If liquid assets like cash in hand, cash at bank, bills receivables, debtors, etc. show an increase in the second year over the first year, this will improve the liquidity position of the concern.

The increase in inventory can be on account of accumulation of stocks for want of customers, decrease in demand or inadequate sales promotion efforts. An increase in inventory may increase working capital of the business but it will not be good for the business.

(2) The long -term financial position of the concern can be analyzed by studying the changes in fixed assets, long-term liabilities and capital .The proper financial policy of concern will be to finance fixed assets by the issue of either long-term securities such as debentures, bonds, loans from financial institutions or issue of fresh share capital.

An increase in fixed assets should be compared to the increase in long-term loans and capital. If the increase in fixed assets is more than the increase in long term securities then part of fixed assets has been financed from the working capital. On the other hand, if the increase in long-term securities is more than the increase in fixed assets then fixed assets have not only been financed from long-term sources but part of working capital has also been financed from long-term sources. A wise policy will be to finance fixed assets by raising long-term funds.

The nature of assets which have increased or decreased should also be studied to form an opinion about the future production possibilities. The increase in plant and machinery will increase production capacity of the concern. On the liabilities side, the increase in loaned funds will mean an increase in interest liability whereas an increase in share capital will not increase any liability for paying interest. An opinion about the long-term financial position should be formed after taking into consideration above-mentioned aspects.

(3) The next aspect to be studied in a comparative balance sheet question is the profitability of the concern. The study of increase or decrease in retained earnings, various resources and surpluses, etc. will enable the interpreter to see whether the profitability has improved or not. An increase in the balance of Profit and Loss Account and other resources created from profits will mean an increase in profitability to the concern. The decrease in such accounts may mean issue of dividend, issue of bonus shares or deterioration in profitability of the concern.

(4) After studying various assets and liabilities an opinion should be formed about the financial position of the concern. One cannot say if short-term financial position is good then long-term financial position will also be good or vice-versa. A concluding word about the overall financial position must be given at the end.

Illustration 1:

From the following information, prepare a comparative Balance Sheet of Deepti Ltd.:

Particulars	*31.3.2011 (₹)*	*31.3.2010 (₹)*
Equity share capital	50,00,000	50,00,000
Fixed assets	72,00,000	60,00,000
Reserves and surplus	12,00,000	10,00,000
Investments	10,00,000	10,00,000
Long-term loans	30,00,000	30,00,000
Current assets	21,00,000	30,00,000
Current liabilities	11,00,000	10,00,000

Solution :

Comparative Balance Sheet
as on 31.3.2010 and 31.3.2011

	2010 ₹	*2011* ₹	*Absolute Change* ₹	*Percentage Change (%)*
Assets				
Fixed assets	60,00,000	72,00,000	12,00,000	20
Investments	10,00,000	10,00,000	—	—
Current assets	30,00,000	21,00,000	(9,00,000)	(—) 30
Total assets	1,00,00,000	1,03,00,000	3,00,000	3
Liabilities and Capital				
Equity share capital	50,00,000	50,00,000	—	—
Reserves and surplus	10,00,000	12,00,000	2,00,000	20
Long-term loans	30,00,000	30,00,000	—	—
Current liabilities	10,00,000	11,00,000	1,00,000	10
	1,00,00,000	1,03,00,000	3,00,000	3

Illustration 2. Following are the Balance sheets of Rachana Ltd. as on 30th June 2010 and 2011 :

Liabilities	*2010* ₹	*2011* ₹	*Assets*	*2010* ₹	*2011* ₹
Share Capital	1,00,000	1,50,000	Fixed Assets	2,00,000	3,00,000
Reserves	1,00,000	1,00,000	Current Assets	50,000	80,000

Loan	20,000	80,000			
Current Liabilities	30,000	50,000			
	2,50,000	3,80,000		2,50,000	3,80,000

Prepare a Comparative Balance Sheet

Solution:

Comparative Balance Sheet of Rachana Ltd.
as on 30th June 2010 and 2011

Particulars	*2010* ₹	*2011* ₹	*Absolute Change* ₹	*Percentage Change* %
A. Fixed Assets	2,00,000	3,00,000	1,00,000	50
B. Working Capital :				
Current Assets	50,000	80,000	30,000	60
Less : Current Liabilities	30,000	50,000	20,000	66.67
	20,000	30,000	10,00	50
C. Capital Employed (A+B)	2,20,000	3,30,000	1,10,000	50
D. Loan	20,000	80,000	60,000	300
E. Shareholder's Funds (C–D)	2,00,000	2,50,000	50,000	25
Represented By :				
F. Share Capital	1,00,000	1,50,000	50,000	50
G. Reserves	1,00,000	1,00,000	–	–
Shareholder's Funds (F +G)	2,00,000	2,50,000	50,000	25

Illustration 3. The following are the Balance Sheets of a concern for the years 2010 and 2011. Prepare a Comparative Balance Sheet and study the financial position of the concern.

Balance Sheet
As on 31st December

	2010 ₹	*2011* ₹		*2006* ₹	*2007* ₹
Equity Share Capital	6,00,000	8,00,000	Land & Buildings	3,70,000	2,70,000
Reserves & Surplus	3,30,000	2,22,000	Plant & Machinery	4,00,000	6,00,000
Debentures	2,00,000	3,00,000	Furniture & Fixtures	20,000	25,000
Long–term loans on Mortgage	1,50,000	2,00,000	Other Fixed Assets	25,000	30,000
Bills Payable	50,000	45,000	Cash in hand and at Bank	20,000	80,000
Sundry Creditors	1,00,000	1,20,000	Bills Receivables	1,50,000	90,000
Other Current Liabilities	5,000	10,000	Sundry Debtors	2,00,000	2, 50,000
			Stock	2,50,000	3,50,000
			Prepaid Expenses		2,000
	14,35,000	16,97,000		14,35,000	16,97,000

Solution :

Comparative Balance Sheet
for the year ending December 31,2010 and 2011

	Year ending 31 December		*Increase/ Decrease (Amounts)*	*Increase/ Decrease (Percentages)*
	2010	*2011*		
ASSETS	₹		₹	₹
Current Assets :				
Cash in hand and at Bank	20,000	80,000	+60,000	+300
Bills Receivables	1,50,000	90,000	–60,000	–40
Sundry Debtors	2,00,000	2,50,000	+50,000	+25
Stock	2,50,000	3,50,000	+1,00,000	+40
Prepaid Expenses	—	2,000	+2,000	
Total Current Assets	6,20,000	7,72,000	+1,52,000	+24.52

Fixed Assets :				
Land & Buildings	3,70.000	2,70.000	–1,00,000	–27.03
Plant & Machinery	4,00,000	6,00.000	+2,00.000	+ 50.00
Furniture & Fixtures	20,000	25.000	+5,000	25.00
Other Fixed Assets	25,000	30,000	+5,000	20.00
Total Fixed Assets	8,15,000	9,25,000	+1,10,000	+13.49
Total Assets	14,35,000	16,97,000	+2,62,000	+18.26
LIABILITIES & CAPITAL				
Current Liabilities :				
Bills Payable	50,000	45,000	–5,000	–10
Sundry creditors	1,00,000	1,20,000	+20.000	+20
Other current liabilities	5,000	10,000	+5000	+100
Total Current Liabilities	1. 55,000	1.75,000	+20.000	+12.9
Debentures	2,00,000	3,00,000	+1,00,000	+50
Long–term loans on Mortgage	1,50.000	2,00,000	+50.000	+33
Total Liabilities	5,05000	6,75,000	+1,70,000	+33.66
Equity Share Capital	6,00,000	8.00,000	+2,00.000	+33
Reserve & Surpluses	3.30,000	2,22,000	–1,08,000	–32.73
Total	14,35,000	16,97,000	+2,62,000	+18.26

Interpretation:

(1) The comparative balance sheet of the company reveals that during 2007 there has been an increase in fixed assets of 1,10,000 i.e. 13.49% while long-term liabilities to outsiders have relatively increased by Rs 1,50,000 and equity share capital has increased by Rs 2 lakhs. This fact depicts that the policy of the company is to purchase fixed assets from the long-term sources of finance thereby not affecting the working capital.

(2) The current assets have increased by Rs 1, 52,000 i.e. 24.52% and cash has increased by Rs 60,000. On the other hand, there has been an increase in inventories amounting to Rs 1 lakh. The current liabilities have increased only by Rs 20,000 i.e. 12.9%. This further confirms that the company has raised long-term finances even for the current assets resulting into an improvement in the liquidity position of the company.

(3) Reserves and surpluses have decreased from Rs 3,30,000 to Rs 2,22,000 i.e., 32 73% which shows that the company has utilized reserves and surpluses for the payment of dividends to shareholders either in cash or by the issue of bonus shares.

(4) The overall financial position of the company is satisfactory,

(ii) Comparative Income Statement:

The Income statement gives the results of the operations of a business. The comparative income statement gives an idea of the progress of a business over a period of time. The changes in absolute data in money values and percentages can be determined to analyze the profitability of

the business. Like comparative balance sheet, income statement also has four columns. First two columns give figures of various items for two years. Third and fourth columns are used to show increase or decrease in figures in absolute amounts and percentages respectively.

Guidelines for Interpretation of Income Statements:

The analysis and interpretation of income statement will involve the following steps:

(1) The increase or decrease in sales should be compared with the increase or decrease in cost of goods sold. An increase in sales will not always mean an increase in profit. The profitability will improve if increase in sales is more than the increase in cost of goods sold. The amount of gross profit should be studied in the first step.

(2) The second step of analysis should be the study of operational profits. The operating expenses such as office and administrative expenses, selling and distribution expenses should be deducted from gross profit to find out operating profits.

An increase in operating profit will result from the increase in sales position and control of operating expenses. A decrease in operating profit may be due to an increase in operating expenses or decrease in sales. The change in individual expenses should also be studied. Some expenses may increase due to the expansion of business activities while others may go up due to managerial inefficiency.

(3) The increase or decrease in net profit will give an idea about the overall profitability of the concern. Non-operating expenses such as interest paid, losses from sale of assets, writing off of deferred expenses, payment of tax, etc. decrease the figure of operating profit. When all non-operating expenses are deducted from operational profit, we get a figure of net profit. Some non-operating incomes may also be there which will increase net profit. An increase in net profit will gave us an idea about the progress of the concern.

(4) An opinion should be formed about profitability of the concern and it should be given at the end. It should be mentioned whether the overall profitability is good or not.

Illustration 2:

From the following information, prepare a comparative income statement of Java Ltd.

	2010	2011
Sales	120% of cost of goods sold	50% of cost of goods sold
Cost of goods sold	₹ 20,00,000	₹ 25,00,000
Indirect expenses		10% of gross profit
Rate of income tax		50% of net profit before tax

Solution:

Comparative Income Statement of Java Ltd.

Particulars	*2010* (₹)	*2011* (₹)	*Absolute* (₹)	*Percentage Change* (%)
Sales	24,00,000	37,50,000	13,50,000	56.25
Less : Cost of goods sold	20,00,000	25,00,000	5,00,000	25.00
Gross Profit	4,00,000	12,50,000	8,50,000	212.50
Less : Indirect expenses	40,000	1,25,000	85,000	212.50
Profit before tax	3,60,000	11,25,000	7,65,000	212.50
Less : Income tax	1,80,000	5,62,500	3,82,500	212.50
Net Profit after tax	1,80,000	5,62,500	3,82,500	212.50

Illustration 3:

The income statements of a concern are given for the year ending on 31st Dec., 2010 and 2011. Re-arrange the figures in a comparative form and study the profitability position of the concern.

	2010 ₹(000)	*2011* ₹(000)
Net sales	785	900
Cost of goods sold	450	500
Operating Expenses:		
General and administrative expenses	70	72
Selling expenses	80	90
Non-operating Expenses :		
Interest paid	25	30
Income–tax	70	80

Solution :

Comparative Income Statement

for the year ended 31st Dec. 2010 and 2011

	31 December		*Increase(+) Decrease (–)*	*Increase(+) Decrease (–) (Percentages)*
	2010 ₹('000)	*2011* ₹('000)	₹('000)	
Net Sales	785	900	+115	+14.65
Less : Cost of goods sold	450	500	+50	+11.0
Gross Profit	335	400	+65	+19.40

Operating Expenses:				
General & Administrative Expenses	70	72	+2	+2.8
Selling Expenses	80	90	+10	+12.5
Total Operating Expenses	150	162	+12	+8.0
Operating Profit	185	238	+53	+28.65
Less : Other deductions Interest paid	25	30	+5	+20
Net profit before tax	160	208	+48	+30.0
Less : Income tax	70	80	+10	+14.3
Net Profit after tax	90	128	+38	+42.22

Interpretation:

The comparative income statement given above reveals that there has been an increase in net sales of 14.65% while the cost of goods sold has increased nearly by 11% thereby resulting in an increase in the gross profit of 19.4%.

Although the operating expenses have increased by 8% the increase in gross profit is sufficient to compensate for the increase in operating expenses and hence there has been an overall increase in operational profits amounting to Rs 53,000 i.e. 28.65% in spite of an increase in financial expenses of Rs5,000 for interest and Rs10,000 for income -tax. There in an increase in net profits after tax amounting to Rs 38,000 i.e. 42.22%. It may be concluded that there is a sufficient progress in the company and the overall profitability of the company is good.

Illustration 4:

Prepare comparative statements from the following data:

Income Statement	*2010*	*2011*
	(₹ in lakhs)	
Net sales	600	750
Cost of goods sold	400	600
Administrative expenses	20	20
Selling expenses	10	10
Net profit	170	120

Balance Sheets	*2010*	*2011*
	(₹ in lakhs)	
Equity capital	400	400
6% Preference share capital	300	300
Reserves	200	245
6% Debentures	100	150
Bills payable	50	75
Creditors	150	200
Tax payable	100	150
	1,300	1,520
Land	100	100
Buildings	300	270
Plant	300	270
Furniture	100	140
Stock	200	300
Cash	300	440
	1,300	1,520

Solution :

Comparative Income Statement
for the year ended ***2010*** *and* ***2011***

		2010 (₹ in lakhs)	*2011 (₹ lakhs)*	*Increase(+) Decrease(–) (₹ lakhs)*	*Increase(+) Decrease(–) (Percentages)*
	Net Sales	600	750	+150	+25
	Less : Cost of goods sold	400	600	+200	+50
(a)	**Gross Profit**	200	150	–50	–25

Operating Expenses :				
Administration Expenses	20	20	–	–
Selling Expenses	10	10	–	–
(b) **Total Operating Expenses**	30	30	–	–
Operating Profit (a–b)	170	120	–50	–29.41
Less : Other Expenses	–	–	–	–
Net Profit	170	120	–50	–29.41

Comparative Balance Sheet
for the year ended ***2010*** *and* ***2011***

	2010 (₹ *lakhs)*	*2011* (₹ *lakhs)*	*Increase/ Decrease* (₹ *lakhs)*	*Increase Decrease (Percentages)*
ASSETS				
Current Assets :				
Cash	300	440	+140	+46.67
Stock	200	300	+100	+50
Total Current Assets	500	740	+240	+48
Fixed Assets :				
Land	100	100	—	—
Buildings	300	270	–30	–10
Plant	300	270	–30	–10
Furniture	100	140	+40	+40
Total Fixed Assets	800	780	–20	–2.5
Total Assets	1300	1520	+220	+16.92
LIABILITIES AND CAPITAL				
Current Liabilities :				
Bills Payable	50	75	+25	+50
Creditors	150	200	+50	+33.3
Tax Payable	100	150	+50	+50
Total Current Liabilities	300	425	+125	+41.67
Debentures	100	150	+50	+50
Total Liabilities	400	575	+175	+43.75
Equity Share Capital	400	400	–	–
6% Pref. Share Capital	300	300	–	–
Reserves	200	245	+45	+22.5
Total	1300	1520	+220	+16.92

Interpretation:

(a) The comparative income statement reveals that there has been increase in net sales of 25% while the cost of goods sold has increased disproportionately by 50% thereby resulting in a decrease of gross profit of 25%. Although the operating expenses have remained constant, there has been decrease in net profit of 29.41%. The company needs to look into the causes of increase in cost of goods sold and control the same.

(b) The comparative balance sheet of the company reveals that during 2008 there has been decrease in fixed assets of Rs 20 lakhs, i.e. 2.5% while long-term liabilities to outsiders have

increased by Rs 50 lakhs, i.e. 50%. There has also been increase of Rs 45 lakhs, i.e. 22.5% in reserves of the company. Thus, the company has used long-term resources to finance additional working capital.

The current assets have increased by Rs 240 lakhs in 2011, i.e. 48%. There has been sufficient increase in balance of cash as well as stock. On the other hand current liabilities have increased by only Rs 125 lakhs, i.e. 41.67%. This further confirms that the company has raised long-term finances even for the current assets resulting into an improvement in the liquidity position of the company.

Illustration 5:

The Income Statements of Sanyasi Ltd are given for the years 2010 and 2011. Convert them into Common-size Income Statement and interpret the changes.

Income Statements
for the years ending 2010 and 2011

	2010 ₹	2011 ₹
Gross Sales	7,25,000	8,15,000
Less: Sales returns	25,000	15,000
Net Sales	7,00,000	8,00,000
Cost of Sales	5,95,000	6,15,000
Gross Profit	1,05,000	1,85,000
Operating Expenses :		
Selling and Distribution Expenses	23,000	24,000
Administrative expenses	12,700	12,500
Total Expenses	35,700	36,500
Operating income	69,300	1,48,500
Other incomes	1,200	8,050
	70,500	1,56,550
Non-operating expenses	1,750	1,940
Net Profit during the year	68,750	1,54,610

Solution :

Common-Size Income Statement
for the year ending 2010 and 2011

	2010		2011	
	₹	%	₹	%
Net Sales	7,00,000	100.00	8,00,000	100.00
Less : Cost of Sales	5,95,000	85.00	6,15,000	76.87
Gross Profit	1,05,000	15.00	1,85,000	23.13
Operating Expenses :				
Selling and Distribution Expenses	23,000	3.29	24,000	3.00
Administration Expenses	12,700	1.81	12,500	1.56
Total Expenses	35,700	5.10	36,500	4.56
Operating Income	69,300	9.90	1,48,500	18.56
Other Incomes	1,200	0.17	8,050	1.00
Total Income	70,500	10.07	1,56,550	19.56
Less : Non operating Expenses	1,750	0.25	1,940	0.24
Net Profit during the year	68,750	9.82	1,54,610	19.32

Interpretation:

(1) The gross profit ratio has improved in 2011 because the company has been able to reduce cost of sales. The cost of sales which was 85% of sales in 2010 was brought down to 76.87% in 2011.

(2) The concern has been able to reduce operational expenses too, this has helped the company to increase operating profit from 9.9% to 18.56%

(3) Net profit ratio has almost doubled from 9.82% to 19.32% in just one year period.

(4) Profitability of the company has improved a lot in 2011. This has been possible for two reasons, one is that the company has increased sales by Rs 1,00,000 in 2011 from 2010, the second reason is that the company has not only controlled but reduced its operating cost. The profitability of the company is very good.

Illustration 6:

Following is the statement of cost of goods manufactured by Nirmala Private Ltd. Present the data in a suitable form for analysis:

	2010 ₹	2011 ₹
Raw Materials :		
Opening Stock	23,000	21,000
Purchases	2,37,000	2,15,000
	2,60,000	2,36,000
Closing stock	26,000	23,000
Materials Consumed	2,34,000	2,13,000
Direct Labour	3,16,000	2,53,000
Manufacturing Expenses	1,42,000	1,21,000
	6,92,000	5,87,000
Variations in goods in Process of Stock:		
Opening of year	14,000	13,000
Closing of year	16,000	14,000
Increase	2,000	1,000
Cost of Goods Manufactured	6,90,000	5,86,000

Solution :

Nirmala Private Ltd.

Comparative Statement of Costs of Goods Manufactured

	Amount		*Percentage of Cost of Goods Manufactured*		*Increase/Decrease*	
	2010 ₹	2011 ₹	2010	2011	Amount ₹	Percentage
Raw materials used	2,13,000	2,34,000	36.35	33.91	+21,000	+9.86
Direct labour	2,53,000	3,16,000	43.17	45.80	+63,000	+24.90
Manufacturing expenses	1,21,000	1,42,000	20.65	20.58	+21,000	+17.36
	5,87,000	6,92,000	100.17	100.29	+1,05,000	+17.89
Less : Adjustment for increase in goods in processes of stock	1,000	2,000	0.17	0.29	1,000	
Cost of goods manufactured	5,86,000	6,90,000	100.00	100.00	+1,04,000	17.75

COMMON-SIZE STATEMENT

Let us make an in-depth study of the meaning and types of common size statement involved in analyzing financial statement.

Meaning of Common-Size Statement:

The common-size statements, balance sheet and income statement are shown in analytical percentages. The figures are shown as percentages of total assets, total liabilities and total sales. The total assets are taken as 100 and different assets are expressed as a percentage of the total. Similarly, various liabilities are taken as a part of total liabilities.

These statements are also known as component percentage or 100 per cent statements because every individual item is stated as a percentage of the total 100. The short-comings in comparative statements and trend percentages where changes in items could not be compared with the totals have been covered up. The analyst is able to assess the figures in relation to total values.

The common-size statements may be prepared in the following way:

(1) The totals of assets or liabilities are taken as 100.

(2) The individual assets are expressed as a percentage of total assets, i.e., 100 and different liabilities are calculated in relation to total liabilities. For example, if total assets are Rs 5 lakhs and inventory value is Rs 50,000, then it will be 10% of total assets (50,000×100/5,00,000)

Types of Common-Size Statements:

(i) Common-Size Balance Sheet:

A statement in which balance sheet items are expressed as the ratio of each asset to total assets and the ratio of each liability is expressed as a ratio of total liabilities is called common-size balance sheet.

For example, following assets are shown in a common-size balance sheet:

	₹	*Percentage*
Cash in hand and at bank	5,000	2.50
Sundry debtors	20,000	10.00
Stock	25,000	12.50
Land and buildings	50,000	25.00
Plant and machinery	1,00,000	50.00
Total Assets :	2,00,000	100.00

The total figure of assets Rs 2,00,000, is taken as 100 and all other assets are expressed as a percentage of total assets. The relation of each asset to total assets is expressed in the statement. The relation of each liability to total liabilities is similarly expressed.

The common-size balance sheet can be used to compare companies of differing size. The comparison of figures in different periods is not useful because total figures may be affected by a number of factors. It is not possible to establish standard norms for various assets. The trends of figures from year to year may not be studied and even they may not give proper results.

Illustration 1:

The Balance Sheets of S & Co. and K& Co. are given as follows:

Balance Sheets

as on Dec.31, 2011

Liabilities	*S & Co.* ₹	*K & Co.* ₹
Preference Share Capital	1,20.000	1,60,000
Equity Share Capital	1,50,000	4,00,000
Reserve & Surpluses	14,000	18,000
Long–term Loans	1,15,000	1,30,000
Bills Payable	2,000	—
Sundry Creditors	12,000	4,000
Outstanding Expenses	15,000	6,000
Proposed Dividend	10,000	90,000
	4,38,000	8,08,000

Land and Building	80,000	1,23,000
Plant and Machinery	3,34,000	6,00,000
Temporary Investment	1,000	40,000
Inventories	10,000	25,000
Book–Debts	4,000	8,000
Prepaid Expenses	1,000	2,000
Cash and Blank Balances	8,000	10,000
	4,38,000	8,08,000

Compare the financial position of two companies with the help of common size balance sheet.

Solution :

Common-Size Balance Sheet
as on Dec. 31, 2011

	S & Co.		K & Co.	
	Amount ₹	%	*Amount* ₹	%
Fixed Assets				
Land and Building	80,000	18.26	1,23,000	15.22
Plant and Machinery	3,34,000	76.26	6,00,000	74.62
Total Fixed Assets	4,14,000	94.52	7,23,000	89.48
Current Assets				
Temporary Investments	1,000	0.23	40,000	4.95
Inventories	10,000	2.28	25,000	3.08
Book Debts	4,000	0.91	8,000	0.99
Prepaid Expenses	1,000	0.23	2,000	0.25
Cash and Bank Balance	8,000	1.83	10,000	1.25
Total Current Assets	24,000	5.48	85,000	10.52
Total Assets	4,38,000	100.00	8,08,000	100.00
Share Capital and Reserves				
Preference Share Capital	1,20,000	27.39	1,60,000	19.80
Equity Share Capital	1,50,000	34.25	4,00,000	49.50
Reserves and Surpluses	14,000	3.19	18,000	2.23
Total Capital & Reserves	2,84,000	64.83	5,78,000	71.53
Long–term Loans	1,15,000	26,25	1,30,000	16.09
Current Liabilities				
Bills Payable	2,000	0.46	—	—
Sundry Creditors	12,000	2.74	4,000	0.49
Outstanding Expenses	15,000	3.44	6,000	0.74
Proposed Dividend	10,000	2.28	90,000	11.15
	39,000	8.92	1,00,000	12.38
Total of Liability Side	4,38,000	100.00	8,08,000	100.00

Comments:

(1) An analysis of pattern of financing of both the companies shows that K &Co. is more traditionally financed as compared to S&Co. The former company has depended more on its own funds as is shown by balance sheet. Out of total investments, 71.53% of the funds are proprietor's funds and outsiders' funds account only for 28.47%.

In S & Co. proprietors' funds are 64.83% while outsiders' share is 35.17% which shows that this company has depended more upon outsiders funds. In the present day economic world, generally, companies depend more on outsiders' funds. In this context both the companies have good financial planning but K& Co. is more financed on traditional lines.

(2) Both the companies are suffering from inadequacy of working capital. The percentage of current liabilities is more than the percentage of current assets in both the companies. The first company is suffering more from working capital position than the second company because current liabilities are more than current assets by 3.44% and this percentage is 1.86% in the case of second company.

(3) A close look at the balance sheets shows that investments in fixed assets have been financed from working capital in both the companies. In S & Co. fixed assets account for 94.52% of total assets while long- term funds account for 91.08% of total funds. In K& Co. fixed assets account for 89.48% whereas long term funds account for 87.62% of total funds Instead of using long-term funds for working capital purposes the companies have used working capital for purchasing fixed assets.

(4) Both the companies face working capital problem and immediate steps should be taken to issue more capital or raise long-term loans to raise working capital position.

(ii) Common Size Income Statement:

The items in income statement can be shown as percentages of sales to show the relation of each item to sales. A significant relationship can be established between items of income statement and volume of sales. The increase in sales will certainly increase selling expenses and not administrative or financial expenses.

In case the volume of sales increases to a considerable extent, administrative and financial expenses may go up. In case the sales are declining, the selling expenses should be reduced at once. So, a relationship is established between sales and other items in income statement and this relationship is helpful in evaluating operational activities of the enterprise.

Illustration 2:

Following are the Income Statements of a company for the years ending Dec., 31, 2010 and 2011:

	2010 (₹s '000)	2011 (₹n '000)
Sales	500	700
Miscellaneous Income	20	15
	520	715
Expenses:		
Cost of sales	325	510
Office expenses	20	25
Selling expenses	30	45
Interest	25	30
	400	610
Net Profit	120	105
	520	715

Solution :

Common-Size Income Statement

for the years ending Dec. 2010 and 2011

	2010		2011	
	(000) ₹	%	('000)	% ₹
Sales	500	100.00	700	100.00
Less: Cost of sales	325	65.00	510	72.86
Gross Profit	175	35.00	190	27.14
Operating Expenses :				
Office expenses	20	4.00	25	3.58
Selling expenses	30	6.00	45	6.42
Total Operating Expenses	50	10.00	70	10.00
Operating Profit	125	25.00	120	17.14
Miscellaneous Income	20	4.00	15	2.14
Total Income	145	29.00	135	19.28
Less: Non –operating expenses :				
Interest	25	5.00	30	4.28
Net Profit	120	24.00	105	15.00

Interpretation:

(1) The sales and gross profit has increased in absolute figures in 2011 as compared to 2010 but the percentage of gross profit to sales has gone down in 2011.

(2) The increase in cost of sales as a percentage of sales has brought the profitability from 35 to 27.14%.

(3) Operating expenses have remained the same in both the years but non-operating expenses have decreased as a percentage in 2011. A slight decrease in non-operating expenses in the latter year could not help to improve profits.

(4) Net profits have decreased both in absolute figures and as a percentage in 2011 as compared to 2010.

(5) The overall profitability has decreased in 2011 and the reason is a rise in cost of sales. The company should take immediate steps to control its cost of sales, otherwise the company will be in trouble.

Illustration 3:

The following are the Balance Sheets of X Ltd. and Y Ltd. for the year ending 31st of December, 2011:

Liabilities	*X Ltd.* ₹	*Y Ltd.* ₹	*Assets*	*X Ltd* ₹	*Y Ltd.* ₹
Equity Share Capital	2,50,000	1,70,000	Land and Building	3,50,000	2,75,000
Preference Share Capital	1,20,000	80,000	Plant and Machinery	2,70,000	3,00,000
Reserves and Surplus	50,000	70,000	Investment (Temporary)	72,000	12,000
Loans	3,50,000	2,79,000	Book–debts	47,500	25,000
Bills Payable	25,000	14,000	Prepaid Expenses	35,400	—
Sundry Creditors	18,000	8,000	Cash and Bank	48,690	21,000
Outstanding Expenses	8,590	4,500			
Dividend Declared	2,000	7,500			
	8,23,590	6,33,000		8,23,590	6,33,000

Present the data in such a way that proper analysis is possible.

Solution :

The common size Balance Sheet will be suitable technique to study financial position of both the companies.

Common Size Balance Sheet of X Ltd. and Y Ltd.

	X Ltd.		*Y Ltd.*	
	₹	%	₹	%
Capital and Reserves :				
Equity shares capital	2,50,000	30.4	1,70,000	26.9
Preference share capital	1,20,000	14.6	80.000	12.6
Reserves and surplus	50,000	6.1	70,000	11.1
	4,20,000	51.1	3,20,000	50.6
Loans	3,50,000	42.5	2,79,000	44.1
Current Liabilities :				
Bills payable	25,000	3.00	14,000	2.2
Sundry creditors	18,000	2.20	8,000	1.3
Outstanding expenses	8,590	1.00	4,500	0.6
Dividend declared	2,000	0.20	7,500	1.2
	53,590	6.40	34,000	5.3
Total Liabilities	8,23,590	100.00	6,33,000	100.00

Assets Side :				
Fixed Assets :				
Land and building	3,50,000	42.5	2,75,000	43.5
Plant and machinery	2,70,000	32.8	3,00,000	47.4
	6,20,000	75.3	5,75,000	90.9
Current Assets :				
Investment (Temporary)	72,000	8.7	12,000	1.9
Book–debts	47,500	5.7	25,000	3.9
Prepaid expenses	35,400	4.4	—	—
Cash and bank	48,690	5.9	21,000	3.3
	2,03,590	24.7	58,000	9.1
Total Assets	8,23,590	100.00	6,33,000	100.00

Illustration 4:

Following are the two Balance Sheets of A Ltd and B Ltd on 31-3-2011:

Assets :	A Ltd. ₹	B Ltd ₹
		(₹in lakhs)
Cash	27	72
Sundry debtors	220	226
Stock	100	174
Prepaid expenses	11	21
Other Current assets	10	21
Fixed assets (net)	635	513
Total Assets	1003	1027
Liabilities & Capital :		
Sundry creditors	42	154
Other Current liabilities	78	62
Fixed liabilities	225	318
Capital	658	493
Total Liabilities	1003	1027

From the above data, prepare a common-size statement and make comments.

Solution :

Common Size Balance Sheets

(*₹ in lakhs*)

	A Ltd		*B Ltd.*	
	Amount	*Percentage of total*	*Amount*	*Percentage of total*
Current Assets	₹		₹	
Cash	27	2.69	72	7.01
Sundry debtors	220	21.93	2.26	22.01
Stock	100	9.97	174	16.95
Prepaid expenses	11	1.10	21	2.04
Other current assets	10	0.99	21	2.04
Total Current Assets	368	36.68	514	50.05
Fixed Assets				
Fixed assets(net)	635	63.32	513	49.95
Total Assets	1003	100.00	1027	100.00
Current Liabilitis				
Sundry creditors	42	4.19	154	14.99
Other current liabilities	78	7.78	62	6.04
Total Current Liabilities	120	11.97	216	21.03
Fixed liabilities	225	22.43	318	30.97
Capital	658	65.60	493	48.00
Total liabilities and capital	1003	100.00	1027	100.00

Comments:

A Ltd. is more traditionally financed as compared to B Ltd. In A Ltd. Share capital consists of 65.6% total investments while the percentage is 48 in B Ltd. Company A Ltd. has relied more on shareholders funds. Generally, if shareholders investments are 50% of total investments even then it is considered to be a safe financial planning B Ltd has 48% investments from

shareholders and have relied on outsiders for other funds. So financial structure of A Ltd is more safe as compare to B. Ltd.

Both the companies have followed the policy of financing fixed assets from long-term funds. In A Ltd investments in fixed assets are 63.32% while long term funds are 88.03%, these figures in B Ltd are 49.95% and 78.97. This shows that both the companies have financed working capital from long-term fund also. In comparison B Ltd has spared more fund for working capital (29.7%) than A Ltd (24.7%).

The working capital position of both the companies is good. A Ltd has 36.68% of current assets while current liabilities are 11.97% of total investments. In B Ltd current assets are 50.05% While current liabilities are 21.03.% Looking at the difference of percentages of current assets and current liabilities, the position of B.Ltd looks better but in fact working capital of A Ltd (Current ratio 3.06) is much better than that of B Ltd (2.4)

The analysis of various figures shows that both the companies have satisfactory long term and short term financial position. In comparison, company A Ltd has better financial position than that of B Ltd.

Illustration 5:

Develop proforma income statement for the months of July, August and September for a company from the following information:

(a) Sales are projected at Rs 2,25, 000, Rs 2,40,000 and Rs 2,15,000 for July, August and September respectively.

(b) Cost of Goods is Rs 50,000 plus 30% of selling price per month.

(c) Selling expenses are 3% of sales.

(d) Rent is 7,500 per month administrative expenses for July are expected to be Rs 60,000 but are expected to rise 1% per month over the previous month's expenses.

(e) The company has Rs 3,00,000 of 8% loan, interest payable monthly.

(J) Corporate tax rate is 70%.

Solution :

Proforma Income Statement
for the months of July, August and September

	July ₹	August ₹	Sept. ₹
Sales	2,25,000	2,40,000	2,15,000
Less: Cost of goods sold[1]	1,17,500	1,22,000	1,14,500
Gross Profit	1,07,500	1,18,000	1,00,500
Operating Expenses			
Administrative expenses	60,000	60.600	61,206
Rent	7,500	7,500	7,500
Selling expenses (3% of sales)	6,750	7,200	6,450
Total Operating Expenses	74,250	75,300	75,156
Profit before interest & tax (G.P.– Operating expenses)	33,250	42,700	25,344
(3,00,000x8/100x1/12)	2,000	2,000	2,000
Profit before tax	31,250	40,700	23,344
Less : Tax @ 70%	21,875	28,490	16,341
Profit after tax	9,375	12,210	7,003

Working Notes

(1) *Calculation of Cost of Goods Sold*

	July ₹	August ₹	September ₹
Cost of goods (Fixed)	50,000	50,000	50,000
Add : 30% of sales	67,500	72,000	64,500
Cost of Goods Sold	1,17,500	1,22,000	1,14,500

TREND ANALYSIS

The financial statements may be analyzed by computing trends of series of information. This method determines the direction upwards or downwards and involves the computation of the percentage relationship that each statement item bears to the same item in base year.

The information for a number of years is taken up and one year, generally the first year, is taken as a base year. The figures of the base year are taken as 100 and trend ratios for other years are calculated on the basis of base year. The analyst is able to see the trend of figures, whether upward or downward. For example, if sales figures for the year 2006 to 2011 are to be studied, then sales of 2006 will be taken as 100 and the percentage of sales for all other years will be calculated in relation to the base year, i.e., 2006

Suppose the following trends are determined.

The trends of sales show that sales have been more in all the years since 2006. The sales have shown an upward trend except in 2008 when sales were less than the previous year i.e., 2004. A minute study of trends shows that rate of increase in sales is less in the years 2007 and 2008.

The increase in sales is 15% in 2006 as compared to 2007 and increase is 10% in 2007 as compared to 2006 and 5% in 2008 as compared to 2007. Though the sales are more as compared to the base year but still the rate of increase has not been constant and requires a study by comparing these trends to other items like cost of production, etc.

Procedure for Calculating Trends:

(1) One year is taken as a base year. Generally, the first or the last is taken as base year.

(2) The figures of base year are taken as 100.

(3) Trend percentages are calculated in relation to base year. If a figure in other year is less than the figure in base year the trend percentage will be less than 100 and it will be more than 100 if figure is more than base year figure. Each year's figure is divided by the base year's figure.

The interpretation of trend analysis involves a cautious study. The mere increase or decrease in trend percentage may give misleading results if studied in isolation. An increase of 20% in current assets may be treated favorable. If this increase in current assets is accompanied by an equivalent increase in current liabilities, then this increase will be unsatisfactory. The increase in sales may not increase profits if the cost of production has also gone up.

The base period should be carefully selected. The base period should be a normal period. The price level changes in subsequent years may reduce the utility of trend ratios. If the figure of the base period is very small, then the ratios calculated on this basis may not give a true idea about the financial data. The accounting procedures and conventions used for collecting data and preparation of financial statements should be similar otherwise the figures will not be comparable.

Illustration:

Calculate the trend percentages from the following figures of X Ltd. taking 2007 as the base and interpret them:

(₹in lakhs)

Year	Sales	Stock	Profit before tax
2007	1,881	709	321
2008	2,340	781	435
2009	2,655	816	458
2010	3,021	944	527
2011	3,768	1,154	672

Solution :

Trend Percentages
(Base Year 2007 = 100)

Year	Sales		Stock		Profit before tax	
	Amount (₹ Lakhs)	Trend Percentage	Amount ₹ Lakhs	Trend Percentage	Amount ₹	Trend Percentage
2007	1,881	100	709	100	321	100
2008	2,340	124	781	110	435	136
2009	2,655	141	816	115	458	143
2010	3,021	161	944	133	527	164
2011	3,768	200	1,154	162	672	209

Interpretation:

(1) The sales have continuously increased in all the years up to 2011. The percentage in 2011 is 200 as compared to 100 in 2007. The increase in sales is quite satisfactory.

(2) The figures of stock have also increased from 2007 to 2011. The increase in stocks is more in 2003 and 2007 as compared to earlier years.

(3) Profit before tax has substantially increased. In five years period it has more than doubled. The comparative increase in profits is much higher in 2010and 2011 as compared to 2009.