Chapter 13

FUNDAMENTAL ANALYSIS

Rational investment decisions are based on effective security analysis. The investor, while investing his savings has the primary purpose of some gain in the form of dividend income and a capital gain. To know, what will be the dividends to be paid on a share and what will be the share price in future, an indepth analysis in respect of expected performance of a share is required. There are two basic approaches suggested for such an indepth analysis. These are: (a) Fundamental Analysis, and (ii) Technical Analysis. First approach is being discussed in this chapter and the second is taken up in the next chapter.

WHAT IS FUNDAMENTAL ANALYSIS

Fundamental analysis is a method of finding out the future price of a stock which an investor wishes to buy. It relates to the examination for the intrinsic value of the share to find out whether the current market price is fair or not, (i.e. whether over-price or under-priced) in the background of the performance of the company and the industry to which the company belongs, and also the broad economic forces within which the factors of investment operates. Thus, *the analysis of the determinants of the fair value of a security is called the fundamental analysis.*

It is, thus, clear that fundamental analysis is based on the premise that each security has an intrinsic value that represents its future economic worth. The intrinsic value of a security is that value which is justified by the facts e.g. assets, earnings dividends, definite prospectus including the factor of management of the company. If the intrinsic value exceeds the current price, it denotes the under valuation of the security in the market and the fundamental analyst recommends purchase of the security. On the other hand, if intrinsic value is less than market price, the security is considered to be over-priced and he advocates sale of the security.

OBJECTIVES OF FUNDAMENTAL ANALYSIS

The investor attempts to look out fundamental analysis as it serves the following objectives:

▶ **Investment Decisions** : Fundamental analysis attempts to find out the intrinsic value of securities (*i.e.* whether under-priced or over-priced) so that the investors can decide to buy or not to buy the securities at the current market prices. It is because, the fundamental analysis encompasses a logical and systematic approach to estimate the returns from securities and their true values.

▶ **Avoids Risk of Loss** : The fundamental analysts view investmenta as long-term decisions. Hence, the ultimate objective of this analysis is not to make speculative profits, rather it is to avoid the risk of loss from buying an over-priced share and selling an under-priced share.

▶ **To Beat the Market** : Buying an under-priced security and earning some abnormal return on investment is known as beating the market. Fundamental analysis is made with the objective to beat the market.
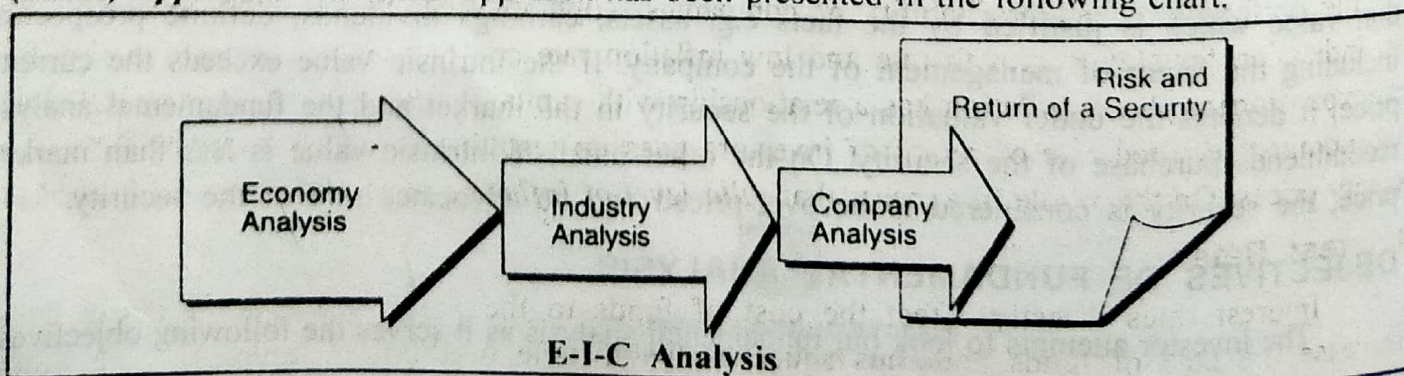
APPROACHES TO FUNDAMENTAL ANALYSIS

Fundamental analyst analyse earnings prospects of a firm to determine the expected dividends and estimate future stock prices. They recognise that the performance of a company depends on its efforts and characteristics, the structure and the performance of the industry to which it belongs and the general economic environment. In order to be rational and scientific, an investor has to evaluate a whole lot of information about the past performance as well as the future prospectus of earnings of the company, industrial and economic environment in the economy and other relevant factors or reverse procedure be followed e.g. economic environment including position and company characteristics. Thus, investors and security analysts when doing fundamental analysis use the following two types of approaches:

● Top-down Approach
● Bottom-up Approach

TOP-DOWN APPROACH OR E.I.C. APPROACH

Under 'top-down approach' investors begin analysis with the economy and the overall market considering such important factors as national income, interest rates and inflation. They next consider likely industry prospectus or sectors of the economy that are likely to do well (or particularly poor). Finally, having decided that economic factors are favaourable to investing, and having determined the industy within such a particular company operates, individual companies are analysed in terms of risk-return perspective. Thus, *this approach analyses economic scenario, industry position and the company expectation, and is also known as Economic-Industry-Company (E.I.C.) Approach.* The E.I.C. approach has been presented in the following chart.

E-I-C Analysis

BOTTOM-UP APPROACH

Small investors can take the reserve approach *i.e.* bottom-up approach to fundamental analysis. In this approach they start with analysis of the prospects of the company and then make the estimates of the prospectus of the industries and ultimately for the economy. The basic premises of the bottom-up approach that the under-valued shares would provide superior and better returns irrespective of the overall economic and industry position, but an inherent drawback of this approach is that it unknowingly involves inconsistent assumptions.

ECONOMIC ANALYSIS

Economic analysis deals with the analysis of forces operating in the overall economy. The over-all economic conditions and economic activities affect corporate profits and investors' expectations and thereby affect the security prices in the capital market. When the level of economic activities is low, security prices are low, and when the level of economic activities is high, securities prices are high reflecting the prosperous outlook for sales and profits of the company. Therefore, this analysis of macro economic environment is essential to understand the behaviour of security prices. This requires an investor to know the (i) key economic forces, and (ii) economic forecasting and its tools.

ECONOMIC FORCES

The commonly analysed economic factors are as follows :

National Income

The growth rate of national income indicates the level of economic activity in the domestic economy. A rapid growth rate is a pointer to prosperity and prospects for increase in sales. Among the large number of income related measures, the investor should concentrate on the growth rates in nominal and real gross domestic product (GDP) including sectoral contribution to it. In the long run, the growth in GDP shows a cyclical pattern, the four distinct phases being recession or depression, recovery and boom or peak. While analysing the growth rate in the GDP, due attention must be paid to the prevailing phase of the economic cycle. Thus, *the higher the rate of growth of GDP, other things being equal, the more favourable it is for the stock market.*

Inflation

Inflation refers to general increasing trend in prices. Inflationary pressure in the economy affects decreases the purchasing power of the consumers and thus has a considerable impact on the performance and profitability of companies. High inflation rate can be considered as an indication for slower growth rate and low inflation rate can be taken as a positive sign for an expansionary phase. Inflation has a relationship with capital market as well. During inflation, the nominal required rate of return of investors goes up resulting in the decrease in bond and equity prices. On the whole, it appears that *mild level of inflation is good for the stock market.*

Interest Rates

Interest rates directly affect the cost of funds to the industry. Higher interest rates increase the cost of funds and thus squeezes the income of the companies. On the other

hand, lower interest rates reduce the cost of funds resulting in higher profit. There are several reasons for change in interest rates such as monetary policy, fiscal policy, inflation rate, etc. Irrespective of the reasons for change in interest rates, the investment pattern in the economy is affected by the change in interest rates. The interest rates affect the opportunity cost of the investors also, thus affecting the bond and equity prices. So, *the changes in interest rates have repercussion on the profit of the companies as well as on the market prices of securities.* There are several indicators of interest rates. These are interest rates in the call money market or the Bank Rate or the Prime lending rate of the lending institutions.

Agriculture and Monsoon

The agricultural sector provides inputs to several industries and absorbs the finished goods produced by a wide spectrum of industries such as pesticides, fertilisers, machine tools and the transport sector. Economic well being of farmers affects demand for consumer durables and non-durables. The fortune of the agricultural sector in India rests on the mercy of the rain God Indra. Thus, the investor should have a reasonable idea of the distributior of rainfall, the cropping pattern - -*khaif* and *rabi*—and major crops under each.

Economic Policy

Social policy affects demand through government spending and taxation, monetary policy involves the manipulation of the level of money supply. The investor should know the expansionary versus contractionary side of the demand policy. The basic difference between the fiscal and monetary polices is their opposite effect on interest rates for the given stance. An expansionary fiscal policy raises interest rate, whereas the monetary policy lowers it. Supply-side polices focus on the incentives to work, save, invest, innovate and take risk. The policies on education, transportation, communication and financial infrastructure are examples of specific supply-side policies. In nut shell : A spell of good monsoons imparts dynamism to the industrial sector and buoyancy to the stock market. Likewise, a streak of bad monsoons casts its shadow over the industrial sector and the stock market.

Infra-structural Facilities and Arrangements

Industrial performance is significantly influenced by infra-structural facilities and arrangements. Which comprises the following :

- Adequate and regular supply of electric power at a reasonable tariff;
- A well-developed transportation and communication system (railway transportation, road network, inland waterways, port facilities, air links, telecommunications system etc.);
- An assured supply of basic industrial raw materials like steel, coal, petroleum products, and cement;
- Responsive financial support for fixed assets and working capital.

Business Cycle

Business cycles refer to cyclical movement in the economic activity in a country as a whole. An economy marching towards prosperity like India, passes through different phases of a business cycle. There are depression, recovering, boom and recession. An understanding

of business cycles will be of great help to an investor. If the indications for recession are there, one should go for investment in the essential goods industries while in case of indications for recovery, the investment in capital goods industry may by preferred.

Public Mood

The general mood and expectations of the public about the economy have a direct impact on macroeconomic performance as well as the effectiveness of economic policies. Uncertainties arising from political, economic and social instability influence the spending behaviour of the masses and investment plans of firms. Eventually, the demand shock triggers a chain reaction, which adds further pessimism to the economic outlook. In India, the National Council of Applied Economic Research (NCAER) constructs and reports the 'business confidence index.

In the current scenario of globalisation, it is also imperative to examine the state of international economic conditions as well. The international economy might affect the firm's export commitments, the price competition it faces internationally and the profits its makes on its foreign investments. In the wake of international division of labour and specialisation, the global economy should also be looked into. For example, a number of Indian IT companies are procuring orders from foreign markets. In view of the expected economic conditions overseas, the profitability of Indian companies may be expected to go up or down as it is happening at present due to global financial crisis.

ECONOMIC FORECASTING

Fundamental analysis starts with economy analysis which deals with the analysis of historical performance of the economy. An investor is however interested in forecasting the expected performance of the economy in general and its effect on the performance of a particular industry or on a particular company. Thus, economic forecasting gains a place of prime relevance in the economy analysis. Forecasting is a very technical and specialised area. As successful investment depends upon forecasting, the investor must have full knowledge to understand and evaluate the economic trends. Following are some of the important forecasting techniques.

Surveys

This method is simple. Through this method, the investors form their opinions or expectations with respect to the future state of the economy. This is the survey of expert opinions. These experts are in the government, business, trade and industry. Who give their opinion on construction activities, plant and machinery expenditures, level of inventory, etc. These factors have important bearing on the economic activities. These anticipatory surveys also incorporate the opinion of consumers with regard to their spending.

Key Economic Indicators

Various types of indicators are studied to find out how the economy is likely to be in the future. These indicators are classified into three categories. They are leading, coincidental and lagging indicators.

▶ **Leading indicators** lead the economic activity in terms of their outcome. These are those time series data of the variables. Which reach high points as well as their low

points in advance of the economic activity. Examples of leading indicators are share price indices, average weekly hours of manufacturing production workers, money supply, cost of living index, and so on.

▶ *Coincidental indicators* reach their peaks and the troughs at approximately the same time as the economy. Some examples of this type are index of industrial production, personal income less transfer payments, etc.

▶ *Lagging indicators* are time series data of variables. They lag behind in their consequence vis-a-vis the economy. These reach their turning points after the economy has already reached its own. Average duration of unemployment. average prime rate, commercial and industrial loans outstanding, etc., are few examples.

Diffusion Indices

To overcome the limitation of indicator method, people use the diffusion index. Diffusion index is a composite index. Which generally combines several indicators into one index. This is done to measure the strength or weaknesses in the movement of a particular kind of indicator. It may sometime mislead one as it does not eliminate the irregular movements in the series, yet t is still a useful tool in the hands of an intelligent forecaster.

Econometric Model Building

It is another useful method which determines the precise relations between dependent and the independent variables. Application of mathematical and statistical models in resolving the economic problems is called econometrics. It presupposes the precise and clear relations between the dependent and independent variables. The analyst is able to forecast a variable more precisely than by any other approach. However, forecasts derived would be as good as the data inputs used and assumptions made.

Opportunistic Model Building

This method is also called Gross National Product (GNP) model building or Sectoral Analysis. Which is often used in practice. It is a most eclectic method. Which borrows ideas from the previous methods. It uses the national accounting framework in order to achieve short-term forecasts. The following are the steps involved in initiating the opportunistic model building :

Step 1 : Hypothesise the total demand in the economy as measured by its total income (GNP) based on likely scenarios in the country like war, peace, political instability, economic changes and rate of inflation, and so on.

Step 2 : Forecast the GNP values by estimating the levels of its various components like consumption expenditure, gross domestic investment, government purchases of goods and services.

Step 3 : The individual components of GNP have been forecasted in the previous step. The analyst then adds them up and gets a value of the forecasted GNP.

Step 4 : The analyst compares total of GNP so arrived at with an independently arrived at. a priori, forecast of GNP. He then tests the overall forecast for internal consistency. This

is done to ensure that both his total forecast and sub-components' forecast make sense and fit together in a reasonable manner.

Some of the indicators of growth in Indian Capital Market during last few years are given in the following table :

Indicators of Growth in Indian Capital Market

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Primary Market								
Capital Issues (Rs. bill.)	490.3	445.8	678.7	4987.3	480.3	417.5	526.6	600.8
Equity (Rs. bill.)	179.6	118.1	256.5	149.2	84.1	75.2	220.0	286.5
Debt (Rs. bill.)	310.7	319.8	412.9	349.2	396.2	342.3	606.6	314.2
GDRs/ADRs/ECBs/ (floatations) ($ mln.)	466.6	4300.6	921.7	6216.7	495.1	188.5	995.2	3387.5
Secondary Market								
No. of companies listed (Number)	5631	5623	5672	5755	5749	5642	5548	4837
Market cap. of all listed companies (Rs. bill.)	4898	4975	11458	6428	7437	7248	13772	18779
Market Capitalisation (% of GDP)	32.2	28.6	59.2	30.8	32.7	29.4	49.9	60.5
Trading volumes on BSE (Rs. bill.)	2078	3120	6850	10000	3049	3136	5033	5185
Trading volumes on NSE (Rs. bill.)	3702	4145	8390	13395	5132	6180	10995	11401

Source : CMIE, Review of Indian Economy, January 2006

INDUSTRY ANALYSIS

After an economic analysis, the industry analysis is the second level of E-I-C approach to fundamental analysis. The performance of a company or firm is closely linked to the performance of the industry to which it belongs. So, after an economic analysis, industry analysis is required. The industry analysis requires an indepth study of the key sectors, and the relative strength and weakness of a particular sector about the economic activities.

MEANING AND CLASSIFICATION OF AN INDUSTRY

Industry broadly covers all the economic activities happening in a country to bring growth. **Industry can be defined as a group of productive or profit making enterprises or organisations that have a similar technically substitutetable goods, services or sources of income.** Industries may be classified into different classes on the basis of market criterion or technological criterion. But from the perspective of security analysis, classification of industries is based on some characteristic homogeneous graphs. According to standard industrial classificaion, industries can be classified as follows :

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(1) **Growth Industry :** The growth industries have special features of high rate of earnings and growth in expansion, independent of the business cycle. The expansion of the industry mainly depends on the technological change. For instance, inspite of the recession in the Indian economy in 1997-98, there was a spurt in the growth of information technology industry. It defied the business cycle and continued to grow. Likewise in every phase of the history certain industries like colour televisions, pharmaceutical and telecommunication industries have shown remarkable growth.

(2) **Cyclical Industry :** The growth and the profitability of the industry move along with the business cycl During the boom period they enjoy growth and during depression they suffer a set back. For example, the white goods like fridge, washing machine and kitchen range products command a good market in the boom period and the demand for them slackens during the recession.

(3) **Defensive Industry :** Defensive industry defies the movement of the business cycle. For example, food and shelter are the basic requirements of humanity. The food industry withstands recession and depression. The stocks of the defensive industries can be held by the investor for income earning purpose. They expand and earn income in the depression period too under the government's umbrella of protection and are counter-cyclical in nature.

(4) **Cyclically Growth Industry :** This is a new type of industry that is cyclical and at the same time growing. For example, the automobile industry experiences periods of stagnation, decline but they grow tremendously. The changes in technology and intro- duction of new models help the automobile industry to resume their growth path.

In India the broad classification of industry is made according to the stock exchange list which is published. This same list is also published in economic' newspapers daily. In this list the industries are classified as follows :

(i)	Engineering;	(ii)	Electricity Generation;
(iii)	Textiles;	(iv)	Cement;
(v)	Steel Mills and alloys;	(vi)	Cable and Electrical;
(vii)	Plantation;	(viii)	Chemicals and pharmaceuticals;
(ix)	Paper;	(x)	Sugar;
(xi)	Rubber	(xii)	Automobiles, cycle and accessories; and
(xiii)	Miscellaneous		

APPROACHES TO INDUSTRY ANALYSIS

After forecasting the economic forces active in the economy, it is necessary to determine the implications of that forecast for the specific industry. For this purpose, generally the following two approaches are used :

- Sensivity Business Cycle
- Industry Life Cycle

SENSIVITY TO BUSINESS CYCLE APPROACH

It has been accepted that all the industries are not equally sensitive to the economic conditions as a business cycles. Some industries are real independent and some are highly sensitive

to the business cycles. For example food and spices industry is really independent of the business cycle, whereas industries engaged in luxurious products and highly sensitive. So, as per sensivity to business cycle approach, Investors usually prefer those industries which have lower, sensivity to business cycle. Investment in higher sensivity industries will be riskier. Sensivity of a particular industry to a business cycle is determined by the following three factors :

- Sensivity of sales
- Operating Leverage
- Financial Leverage

(1) **Sensitivity of Sales :** Some industries such as food, drugs, medical services and other necessities have low sensitivity whereas luxury goods have high sensitivity to business cycles.

(2) **Operating Leverage :** Operating leverage refers to degree of change in operating profits as a result of change in sales. For any firm, higher the percentage of fixed cost, greater is the degree of operating leverage. Industries which have higher variable costs as opposed to fixed costs, will be less sensitive to business cycles. If the economic recession appears, output will fall reducing the total variable costs. Profits in those industries which have high fixed costs will swing more widely with sales because costs do not move to offset sales changes.

(3) **Financial Leverage :** Financial leverage of a firm depends upon the use of debt funds in the capital structure. Higher the proportion of borrowed funds, greater is the degree of financial leverage, because interest payment on borrowings have to be made irrespective of the sales level. Profits of those firms which have high borrowing are more sensitive to business cycles than of those firms which have lesser borrowings.

INDUSTRY LIFE CYCLE APPROACH

This approach suggests that every industry passes through four distinct phases, as given below in the chart, in sequence and the profitability of an industry depends on its life cycle. The four phases and their featurs are now briefly explained.

Life Cycle of an Industry
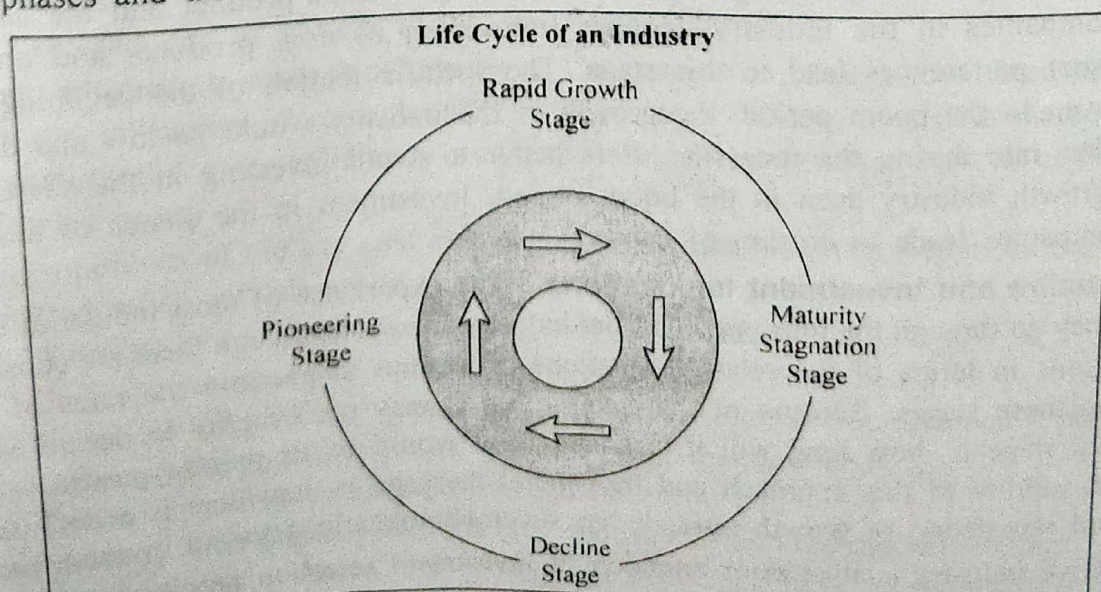
(1) **Pioneering Stage :** This is the first stage of industrial cycle of a new industry. During this stage, the demand for the product is promising and technology of the product is low. Many producers will be attracted to produce the product and there would be tough competition. The rule of *'survival of the fittest'* is applicable and the weaker firms disappear from the scene. It is not easy to select companies for investment because the survival rate is unknown. This is the stage where the more promising players bring a lot of return to the investors. The IT industry was in the pioneering stage in India. In this stage :

- investment decision is a highly risky one.
- the risk and return are positively correlated.
- investment is rewarding.
- for an investor looking for steady long-term returns with risk aversion, he should in general avoid investing at this stage.

(2) **Rapid Growth Stage :** The second stage is a rapid growth stage. The chaotic competition and growth is more or less over. Only the stronger companies survive and they consolidate their position. The technology of the production would have improved. It would result in low-cost production and good quality products. The companies experience stable growth rate and start declaring dividends to the shareholders. In this stage :

- risk is considerable reduced.
- investors with risk aversion invest.
- the prices of the securities issued by these companies fetch higher prices.

(3) **Maturity or Stabilisation Stage :** In the stabilisation stage, the growth rate tends to moderate and the rate of growth would be more or less equal to the industrial growth rate or the gross domestic product growth rate. Symptoms of obsolescence may appear in the technology. To keep going, technological innovations in the production process and products should be introduced. The investors have to closely monitor the events that take place in the maturity stage of the industry.

(4) **Decline Stage :** In this stage, demand for the particular product and the earnings of the companies in the industry decline. Innovation of new products and changes in consumer preferences lead to this stage. The specific feature of the declining stage is that even in the boom period, the growth of the industry would be low and decline at a higher rate during the recession. It is better to avoid investing in the shares of the low growth industry even in the boom period. Investment in the shares of these types of companies leads to erosion of capital.

(5) **Evaluation and Investment Implications :** The experience of most industries suggests that they go through the four phases of the industry life cycle, though there are considerable variations in terms of the relative durations of various stages and the rates of growth during these stages. Because of these variations it may not be easy to define what the current stage is, how long will it last, and what would be its precise growth rate. The broad validity of this approach and its general message is that there is a definite trend toward retardation of growth rates. It has several implications for an investor such as :

- Give industry analyst prior attention in investment selection process.

- Display caution during the pioneering stage—this stage has appeal primarily to speculators.
- Respond quickly and expand commitments during the rapid growth stage.
- Moderate investment during the maturity stage.
- Sensibly disinvest when signals of decline are evident.

SPECIFIC FEATURES AND CHARACTERISTICS

Since each industry is unique, a systematic study of its specific features and characteristics should be analysed to identify the industries where investments can be made. Some of these features are as follows :

(1) **Structure of Industry and Nature of Competition :** It is an essential factor that determines the demand for the particular product, its profitability and the price of the company's share. The following points should be considered to understand the nature of competition and industry structure :

- The number of firms in the industry and the market share of the top few (four to five) firms in the industry;
- Licensing policy of the government;
- Pricing policies of the firm;
- Degree of homogeneity or differentiation among products;
- Competition from foreign firms; and
- Comparison of the products of the industry with substitutes in terms of quality, price, appeal, and functional performance.

(2) **Nature and Prospect of Demand :** The product produced by the industries are demanded by the consumers and other industries. The investor has to analyse the following points to understand the nature and prospect of demand :

- Major customers and their requirements;
- Key determinants of demand;
- Degree of cyclicality in demand; and
- Expected rate of growth in the foreseeable future.

(3) **Cost, Efficiency and Profitability :** Cost structure, that is the fixed and variable cost and utilisation of capacity affects the cost of production and profitability. Hence, to analyse the cost, efficiency and profitability the investor has to understand the following points :

- Proportions of the key cost elements, namely, raw materials labour, utilities, and fuel;
- Productivity of labour;
- Turnover of inventory, receivables, and fixed assets;
- Control over prices of outputs and inputs;
- Behaviour of prices of inputs and outputs in response to inflationary pressures;
- Gross profit, operating profit, and net profit margins; and
- Return on assets, earning power, and return on equity.

(4) **Technology and Research :** For any industry to survive the competition in national and international markets, the production processes have to be technically sound,

which depends upon research and development. Therefore, an investor should probe the following areas in respect of technology and research :

- Degree of technological stability;
- Important technological changes on the horizon and their implications;
- Research and development outlays as a percentage of industry sales; and
- Proportion of sales growth attributable to new products.

(5) **Government Attitude :** The nature and extent of regulation and incentives (fiscal, financial and in other forms) evidences the attitude of the government towards industry. The attitude of government may be supportive or restrictive. Much depends on the priorities and policies of the government. Subsidies and tax holidays are provided for export oriented products. Presently, the government is encouraging the growth of certain industries like insurance, civil aviation etc. by permitting foreign investment in them. However, this may jeopardise the prospects of existing firms. Hence, like investor should consider the role of the government in such industries.

(6) **SWOT Analysis :** The above mentioned factors themselves would become strength, weakness, opportunity and threat (SWOT) for the industry. Hence, the investor should carry out a SWOT analysis for the chosen industry. For example, (i) increase in demand for the industry's product presence of numerous players in the market and become its strength; (ii) competition becomes the threat to a particular company in the respective industry; (iii) progress in the research and development in that particular industry and entry of multinationals in the industry is an opportunity; and (iv) cheap imports of the particular products are threat to that industry. In this way the factors have to be arranged and analysed.

COMPANY ANALYSIS

Company analysis is the last tier in the E-I-C analysis sequence. *Company analysis is a method of assessing the competitive position of a company, its earnings and profitability, the efficiency with which it operates, its financial position, and its future aspects with respect to the earnings of its shareholders.* Thus, at this stage, the emphasis is on the financial and other characteristics of the company which determines its earning prospects. The analysis of the past performance of the company and its present conditions provide the perspective to forecast its future earnings. The basic objective of company analysis is to identify better performing companies in an industry. The companies which are likely to be competitively better as compared to other companies are identified for investment. To attain this objective, the following factors should be considered as analysed.

- Quality of management
- Labour-management relations and location
- Pattern of existing shareholdings
- Growth record
- Size and ranking
- Earnings analysis
- Financial analysis.

These factors are briefly discussed here under :

QUALITY OF MANAGEMENT

The quality of management is an important factor in shaping the success of the company and returns to shareholders. It is difficult to assess and analyse quality of management, because it is an *intangible factor*. For ascertaining the quality of management, an analyst is required to have some historical information about the persons constituting the boards of directors and about the persons heading different functional areas of the business activity of the firm. It is a well known fact that shares of certain business houses command a higher premium than those of similar companies in different industries. One of the reasons, is the good quality of management and reputation of management personnel. Investors have greater confidence in such business house. Since they have greater confidence, they pay higher prices for shares and securities of such business houses. An analytical report on quality of management of a company is, therefore, helpful in deciding whether or not to invest in shares and securities of such a company. Some of the qualitative indicators of quality of management are :

- Experience of directors and other senior managers of a company;
- Skill, knowledge, and integrity of top management team of the company;
- Degree of professionalization of management;
- The policy of top management of the company regarding relationships with shareholders (this can be studied with the help of dividend and bonus distributions);
- Association of members of top management team with financial institutions, law-making bodies, top academic and professional institutions, associations of industries, chambers of commerce and trade, and the like.

LABOUR-MANAGEMENT RELATION AND LOCATION

An important factor in the growth prospects of a company is labour-management relation. Many organisations have shown declining trend in performance because of disturbed labour-management relations. Hence, some important indicators of labour-management relations should be studied. These indicators are :

- Number and duration of strikes;
- Number and duration of lock-outs;
- Affiliations of trade unions with political parties;
- Number of recognised trade unions;
- Presence of unrecognised unions and their memberships;
- Awards on industrial disputes.

It may be pointed out that a detailed study of all these indicators is not needed. Even, trends and major happenings can provide important clues about the labour-management relations of the companies whose securities and stocks are being considered as investment outlet.

Location of the selected companies, particularly location of their manufacturing plants and facilities, determine economic viability of companies. The future growth of shares and securities of selected companies depends on their economic viability. While analysing location, information about following factors should be considered :

- Availability of inputs like power, raw materials, skilled labour;
- Nearness of markets.

These factors affect the cost of production, size of production, continuous flow of production, and ease in sale of end products. Ultimately, location affects the profitability and growth potential of companies.

PATTERN OF EXISTING SHAREHOLDINGS

Pattern of existing share holdings indicates the interest of various parties and groups, foreign technical and financial collaborations (if any) in the financial progress of a company. An important class of shareholders which has emerged at present, is of financial institutions like LIC, IDBI, IFCI, SFCs and ICICI, Mutual Funds, FIIs, NRIs. : These shareholders are expected to conduct extensive as well as intensive study of present state and future prospects of the companies in which they invest. The very presence of these shareholders is an important indicator of future progress of a company. These institutions have sufficient bargaining strength to protect and further the interest of other shareholders who are weak because of their relatively smaller shareholdings. A study of pattern of existing, holdings, therefore, helps in assessing :

- The future growth in value of shares and securities;
- The degree of safety of investment of funds in shares and securities;
- The protection from any manipulation on the part of companies:
- The future trend in dividend income and capitalisation of retained earnings affecting the future value of shares and securities.

Another important aspect of pattern of existing shareholdings is that *it provides clues to the marketability of securities.* If shareholding is dispersed geographically as well as over a large number of different types of shareholders, purchase and sale of securities at different stock-exchanges are likely to be frequent and in large number. This phenomenon of existing shareholdings increases the degree of marketability of shares and securities. Hence, the existing pattern of shareholdings of a company should also be studied from the point of view of judging the degree of marketability of shares and securities of the company.

GROWTH RECORD

Some major indicators of growth of a company are sales, capital employed, and earning per share. These indicators should be studied for some past-years. The investor should analyse these indicators for several companies in an industry and for different industries to get a comparative appraisal of companies and industries. Past data should be used for projection of these indicators for short as well as long periods. Comparative assessment of growth records of different companies is likely to give an idea of image of these companies. With the help of such assessment, an investor can have an idea about whether the shares are under-priced or over-priced.

SIZE AND RANKING

An idea about the relative significance of size and rank of a company in the industry helps the investor in assessing the *risk associated* with the investment in shares and debentures of that company. Some of the variables used for evaluating the size and rank of companies are :

- Net capital employed;
- Net profits;
- Total net sales;
- Return on investment (ROI).

Economic Times Research Bureau uses these variables, and reports the ranking of selected top companies periodically.

EARNINGS ANALYSIS

An investor has to analyse the earnings of the company to arrive at the fair value of its shares. The earnings of the company can be analysed with the help of market value ratios, which are most important for the investors since buying and selling decisions are ultimately related to market value of shares. The investors can determine the magnitude and direction of the movement in a company's earnings. After analysing the relevant ratios, the present investor can decide whether to hold, sell or purchase the share and the prospective investor can decide whether or not to buy the shares. These ratios also enable the investors forecasting the future price of their investments. The following such ratios are being discussed in brief as under.

EARNINGS PER SHARE (EPS)

This ratio shows the profit available for each equity share. Equity shareholders are the ultimate owners of the company and they get profit after claims of all outsiders. This ratio gives investor an exact figure of profit which is entitled to him by virtue of his ownership of one equity share.

$$EPS = \frac{\text{Profit After Tax} - \text{Preference Dividend}}{\text{Number of equity shares}}$$

EPS is most widely published data relating to a company. It gives an indicator of company's performance in very brief. Of course, an analyst can not solely rely on EPS. Investment analyst has to study other ratios and use them to understand their impact on EPS.

For example, an investor is considering the purchase of stock of either company A or B. Each stock is being sold at Rs. 50 per share. The earnings trend for the two companies is given as below :

	2002	2003	2004	2005	2006	2007
Company A's	1.25	1.45	1.70	1.90	2.00	2.30
Company B's	2.50	3.00	2.75	2.25	2.10	2.30

Both the companies had same earnings per share in the last year. But earnings trend differed widely. While company A had initially low earnings per share but steadily progressed and had doubled EPS during five years. As against this, EPS in the case of company B remained, by and large, the same and recorded wide amplitude of fluctuations over the five-year period. An analysis of the earnings trend shows a brighter future for company A than company B.

Thus, EPS provides an insight into the investment potentially of an organisation. However, care must be exercised while using this ratio. If a company makes extraordinary gains or

loss appearing as part of net income, earnings per share so computed will fail to portray correct picture about the profitability and managerial efficiency of the organisation. It would, therefore, be meaningful to compute two EPS- one showing the earning per share resulting from normal operations and the other the earnings per share impact of extraordinary events. This will help the analyst to eliminate the distorting influence of the abnormal events from the basic earnings per share figure and assess the trend of normal earnings per share over a period of time.

DIVIDEND PER SHARE (DPS)

This ratio is very similar to EPS. It gives the amount of dividend available for each equity share. The formula is :

$$DPS = \frac{Equity\ Dividend}{Number\ of\ Equity\ Shares}$$

Here, Equity Dividend should include both interim and final dividend paid/declared for equity shareholders. The ratio is useful for shareholders to know what amount of current income they are going to earn on one equity share. An investor desiring more income would like to invest in the shares in the high dividend paying company. In should be noted that DPS is not a measure of profitability of a company, since retained earnings might have been utilised for payment of dividend. This increases the distributable amount without increasing the number of shares.

PRICE-EARNING RATIO (P/E RATIO)

This is another very popular ratio. It's important because it relates company's profitability with market price for its share.

$$P/E\ Ratio = \frac{Market\ Price\ Per\ Share}{Earning\ Per\ Share\ (EPS)}$$

It indicates the market opinion of the earning capacity of a share and the future pro-spectus of the company. A high P/E ratio means company's shares are overpriced. An investor may like to choose a share with low P/E ratio as he has to pay lesser price per share compared to company's earnings. Of-course, investor can not, rely only on P/E ratio. Sometimes, a high P/E ratio may indicate investor confidence in good future prospects of the company.

DIVIDEND YIELD

This ratio relates the dividend on share to its market price. The formula is :

$$Dividend\ yield = \frac{Dividend\ Per\ Share}{Market\ Price\ Per\ Share} \times 100$$

For example, if a dividend of 40% is declared on a share of face value of Rs. 10, whose market price is Rs. 50, thus the actual return to the investor would be only Rs. 8 (4/50 × 100). Thus, this ratio shows the actual rate of dividend on the investment. Dividend yield is useful to an investor expecting current income from investment in shares. However, in real life normally the dividend yield on good quality shares is very low.

PAY-OUT RATIO

Pay-out Ratio relates dividend payment from company's profits. It gives the percentage of earnings that are distributed through dividends. It is calculated as :

$$\text{Dividend Pay Out Ratio} = \frac{DPS}{EPS} \times 100$$

Pay out ratio shows dividend policy of the company. Normally a Growth Share will have low pay-out ratio as company will re-invest most of its profits in new projects.

DIVIDEND COVER

This ratio measures the ability of a company to pay dividend on shares and is calculated as follows :

$$\text{Dividend Cover} = \frac{EPS}{DPS} \times 100$$

This ratio indicates the number of times the dividend is covered by company's profits. This also shows the dividend policy of the company. Dividend Cover Ratio is just the reciprocal of Dividend Pay-Out Ratio.

BOOK VALUE PER SHARE

This ratio indicates the net worth per equity share. It is calculated as :

$$\text{Book Value per Share} = \frac{\text{Equity Share Capital + Reserves and Surplus}}{\text{No. of Equity Shares}}$$

The book value per share shows the intrinsic value per share of the company. It shows asset-backing for company's share. A higher book-value indicates high reserves of the company. Normally blue-chip companies have high net worth, and high book value.

CASH EARNING PER SHARE (CEPS)

Earnings per share, or EPS as it is popularly known has long been a favourite measure for investment analysis. But of late, the Cash Earnings Per Share (CEPS) is seen as an improvement. CEPS is arrived at by adding back the depreciation provision to the Profit After Tax (PAT) thus :

$$CEPS = \frac{PAT + Depreciation}{\text{No. of shares}}$$

CEPS is considered more efficient investment signals because of the following reasons :

- Since depreciation policies differ widely among companies and even within a company from one year to another and hence makes comparisons difficult.
- Another second factor is that they give a better idea of the cash available for use within a company, since depreciation is a non-cash charge.
- A third factor for preference is that EPS discriminates against growing companies which have been building their gross block of assets, compared with companies which are growing slowly and therefore are not investing in fixed assets. If a company's profit figure is low due to high depreciation it does not indicate less efficiency.

- The ranking of shares considering the cash earnings per share instead of earnings per share can radically change an investors view of a company. For instance, Reliance Industries Ltd. has much higher CEPS than EPS. However, it must be remembered that both CEPS and EPS get influenced by the size of the equity base. And CEPS can be a good measure if read along with EPS. If a company's EPS and CEPS are high, it is a clear signal that a company is inherently sound.

ROE ANALYSIS

The ROE examines profitability from the perspective of the equity investors by relating profits available for the equity shareholders with the book value of the equity investment. The measure of return on equity (ROE) can be analysed in terms of profitability, turnover and leverage as follows :

$$ROE = \text{Net profit margin} \times (\text{Total assets turnover ratio}) \times (\text{Total assets to net worth})$$
$$= (PAT/NS) \times (NS/TA) \times (TA/NW)$$

PAT/NS can be expressed as the product of pretax margin $\left(\dfrac{PBT}{NS}\right)$

and, post tax retention ratio $\left(i.e.\ 1 - \dfrac{TAXES}{PBT} \quad \text{Or} \quad \dfrac{PAT}{PBT}\right)$

Then, $\quad ROE = \dfrac{PBT}{NS} \times \dfrac{PAT}{PBT} \times \dfrac{NS}{TA} \times \dfrac{TA}{NW} = \dfrac{PAT}{NW}$

Where; $\quad$ PAT $\quad = \quad$ Profit After Tax
$\qquad\qquad$ NS $\quad = \quad$ Net Sales
$\qquad\qquad$ TA $\quad = \quad$ Total Assets
$\qquad\qquad$ NW $\quad = \quad$ Net Worth

PAT/NS provides a measure of profitability, NS/TA indicates the efficiency with which the total assets are employed, and TA/NW serves as a measure of leverage. A trend analysis of PAT/NS and TA/NW provides an idea of the business and financial risks assumed by the company.

Higher the post tax margin, and total assets turnover ratio the more profitable the firm. But, interpretation of high turnover ratio is further complicated. An extremely high turnover ratio may indicate that the firm is up against the capacity limits of its plant and equipment and therefore provide a warning signal that the firm may have to expand its capacity

RETURN ON INVESTMENT (DU PONT APPROACH)

Return on investment is one of the most successful yet simple techniques ever conceived to aid both decision-making and performance evaluation. This technique was first developed by the Du-Pont Company of U.S.A. for analysing and controlling financial performance. If brings together the activity ratios and profit margin as sales and shows how these ratios interact to determine profitability of assets. Return on investment can be computed with the help of the following formula;

$$\text{Return on investment (ROI)} = \frac{Sales}{Total\ Assets} \times \frac{Earning\ After\ Tax}{Sales}$$

The first item of the equation *assets turnover* expresses the total asset turnover. This measures efficiency of asset management. Other things being equal, the great the index, the more efficiently assets are being managed. The second term of the Du Pont analysis exhibit the return to the sales ratio. It measures efficiency of expenses control since the difference between sales and earnings after tax represents the expenses and taxes of the company. The smaller these expenses the higher will be ratio of earnings after taxes to sales. In other words, larger return on sales would mean the management success in controlling expenses. Thus, the second term of the Du Pont analysis is an index of expenses control. If the index of asset management efficiency is multiplied by the index of expenses control, the result is a magnified index of the company's financial well being.

In order to make the analysis more meaningful the ROI of the company must be compared with industry averages and with the company's own ROI of the past years. Where the company's ROI is below the industry average, the Du Port analysis provides sufficient clue to deficiency in asset management or absence of effective expenses control or both. Further, if a comparative study of the company's ROI of the past few years reveals declining tendency it focuses attention on the management efficiency of the company. This calls for prompt corrective action before the situation goes out of control.

Illustration 1 : The followng data are extracted from the published accounts of two companies Aarti Ltd., and Bharti Ltd., for the year 2007 and 2008 of the same industry. You, as an investment consultant are required :

(i) To find out present and future market price.
(ii) To calculate dividend pay-out ratio.
(iii) To advice your client to buy best security.

(Rs. in Lakhs)

Particulars	Aarti Ltd.		Bharti Ltd.	
	2007	2008	2007	2008
Equity Capital (Rs. 10 per share fully paid)	1,000	1,000	900	1,000
Net Profit after Tax	200	210	180	190
Dividend to Preference Shares	50	50	30	30
Dividend per Equity Shares	Re. 1	Rs. 1.2	Rs. 1.5	Rs. 1.4
P/E Ratio	14	15	14	12.8

Solution

(i) (a) *Calculation of Present Market Price :*

	Aarti Ltd.	Bharti Ltd.

$$EPS = \frac{PAT - Preference\ Dividend}{No.\ of\ Equity\ Shares}$$

Aarti Ltd. $= \dfrac{200 - 50}{100}$ = Rs. 1.50

Bharti Ltd. $= \dfrac{180 - 30}{90}$ = Rs. 1.67

$$P/E\ Ratio = \frac{Market\ Price}{EPS}$$

Aarti Ltd. = 14

Bharti Ltd. = 14

∴ Market Price = (P/E × EPS)

Aarti Ltd. = 14 × 15 = Rs. 21

Bharti Ltd. = 14 × 1.67 = Rs. 22.38

(b) Calculation of Future Market Price

$$EPS = \frac{210 - 50}{100} \qquad \frac{190 - 30}{100}$$

$$= Rs.\ 1.6 \qquad = Rs.\ 1.6$$

P/E Ratio

$$= 15 \qquad = 12.8$$

$$\therefore Market\ Price = (P/E \times EPS) \qquad = Rs.\ 24 \qquad = Rs.\ 20.48$$

(ii) Dividend Pay-out Ratio $= \dfrac{DPS}{EPS} \times 100$

For 2007

$$= \frac{1}{1.5} \times 100 \qquad = \frac{1.5}{1.67} \times 100$$

$$= 67\% \qquad = 90\%$$

For 2008

$$= \frac{1.2}{1.6} \times 100 \qquad = \frac{1.4}{1.6} \times 100$$

$$= 75\% \qquad = 88\%$$

(iii) Both the securities are good for investment. However Bharti Ltd. has EPS of Rs. 1.6 which is equal to Arti Ltd. but the Present Market Price of Arti Ltd. is comparatively lower than Bharti Ltd. Though, the future dividend of Bharti Ltd., is little higher than Arti Ltd. its Market Price will reduce in future. Hence, *it is advised to buy security of Arti Ltd., at present so that the investor will be benefited by capital appreciation of Rs. 3 per share in future.*

ANALYSIS OF FINANCIAL STATEMENTS

The basic objective of company analysis is to identify better performing companies in an industry. Those companies which are likely to be better placed as compared to other companies are selected for investment. Analysis of financial statements which comprises–(i) balance sheet; (ii) profit and loss account or income statement; and (iii) cash flow statement is helpful in attaining this objective.

Analysis of financial statements means rearrangement of figures following some specific techniques facilitating subsequent interpretation. Analysis also includes some further accounting operations relevant to the particular technique or techniques adopted and the specific purpose to be served. Many tools and techniques of analysis of financial statements have been evolved to arrive at correct conclusions for investment in securities through a proper interpretation of the financial data provided in the financial statements. The more important techniques are as follows :

- Comparative statements analysis
- Common-size statements
- Trend analysis
- Ratio analysis
- Cash Flow analysis
- Funds Flow analysis

A brief description* of the above techniques is given on next page.

* For detailed description refer author's 'Management Accounting-I'

COMPARATIVE STATEMENT ANALYSIS

Comparative financial statements are those statements which summarise and present related accounting data for a number of years incorporating therein the changes (absolute or relative or both) in individual items. In these statements, the financial data for two or more years are placed and presented in adjacent columns so that it may provide a true perspective in order to facilitate periodic comparison. The preparation of comparative financial statements is based on this logic that a statement covering a period of a number of years is more meaning-ful and significant than for a single year only, because financial data for one year represent only one phase of the long and continuous history of the firm. The comparative financial statements are designed to disclose the absolute figure as well as percentage over the period.

Comparative Balance Sheet : Comparative balance sheet is a statement of some concern comparing the figures for two financial periods/years. It is the study of the trends in the same item, group of items and computed items in two or more balance sheets of the same business on different dates. The comparative balance sheet for many years give an idea about trend in movement of a particular item. This has been illustrated below.

Illustration 2 : From the following balance sheets of Ganesham Ltd., prepare comparative balance sheet as on 31st March, 2006 :

Liabilities	31.3.2005	31.3.2006	Assets	31.3.2005	31.3.2006
	Rs.	Rs.		Rs.	Rs.
Share Capital	25,000	25,000	Fixed Assets	40,000	52,000
Reserves	15,000	25,000	Current Assets	15,000	13,000
Long-term Loans	12,000	10,000	Other Assets	5,000	5,000
Current Liabilities	8,000	10,000			
	60,000	70,000		60,000	70,000

Solution

Comparative Balance Sheet
(as at 31st March, 2006)

Particulars	As at 31st March		Increase (+) or Decrease (−) in 2005-06	
	2005	2006	Amount	%
Assets	Rs.	Rs.	Rs.	
Fixed Assets	40,000	52,000	+ 12,000	+ 30.0
Current Assets	15,000	13,000	− 2,000	− 13.3
Other Assets	5,000	5,000		
Total	60,000	70,000	+ 10,000	+ 16.7
Capital and Liabilities				
Share Capital	25,000	25,000		
Reserves	15,000	25,000	+ 10,000	+ 67.0
Long-term Loans	12,000	10,000	− 2,000	− 16.7
Current Liabilities	8,000	10,000	+ 2,000	+ 25.0
Total	60,000	70,000	+ 10,000	+ 16.7

Comparative Profit and Loss Account : This comparative profit and loss account or income statement shows the operational results of the business for a number of accounting periods so that changes in absolute figures from one period to another may be stated in terms of money value and percentages. The comparative profit and loss account is helpful in deriving meaningful conclusions regarding changes in sales variables, cost of goods sold, different expenses etc. This has been illustrated below :

Illustration 3   From the following information relating to the activities of Malu and Company Ltd. for two years, prepare comparative income statement.

	2004-05 (Rs.)	2005-06 (Rs.)
Sales	1,22,400	1,46,880
Sales Returns and Discount	2,400	2,800
Opening Stock	16,000	16,800
Purchase (net)	73,600	80,400
Closing Stock	16,800	16,200
Selling Expenses	24,000	26,400
Administrative Expenses	12,000	13,600
Other Income	1,200	1,600
Other Expenses	1,600	2,400

Solution

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Malu and Company
Comparative Profit and Loss Account
for the year ended 31st March, 2005 & 2006

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Particulars	Amount As at 31st March		Increase (+) or Decrease (–) in 2005-06	
	2005	2006	Amount	%
Assets	Rs.	Rs.	Rs.	
Sales	1,22,400	1,46,880	24,480	20.0
Less : Returns, Discount etc.	2,400	2,800	400	16.7
Net Sales (1)	1,20,000	1,44,080	24,080	20.7
Cost of Goods Sold				
Opening Stock	16,000	16,800	800	5.0
Add : Purchases (Net)	73,600	80,400	6,800	9.2
	89,600	97,200	7,600	8.5
Less : Closing Stock	16,800	16,200	(–) 600	(–) 3.6
Cost of Goods Sold (2)	72,800	81,000	8,200	11.3
Gross Profit on Sales (1 – 2) = (3)	47,200	63,080	15,880	33.6
Operating Expenses				
Selling Expenses	24,000	26,400	2,400	10.0
Administrative Expenses	12,000	13,600	1,600	13.3
Total Expenses (4)	36,000	40,000	4,000	11.1

Net Operating Profits (3 – 4)	11,200	23,080	11,880	106.1
Add : Other Incomes	1,200	1,600	400	33.3
	12,400	24,680	12,280	99.0
Less : Other Expenses	1,600	2,400	800	50.0
Net Profit before tax	10,800	22,280	11,480	106.3

COMMON-SIZE STATEMENT ANALYSIS

Common-size statement is a financial tool of studying key changes and trends in financial position of a company. In common-size statement each item is stated as a percentage of the total of which that items is a part. Each percentage exhibits the relation of the individual item to its respective total. Therefore, the common-size percentage methods represents a type of ratio analysis. This is why this statements is also designated as "component percentage" or "100 percent statement". Preparation of the common-size statement involves two steps :

- State the total of the statement as 100 per cent;
- Compute the ratio of each statement item to the statement total.

There are two types of common-size statements : Common-size Balance Sheet and common-size Profits and Loss Account.

Common-size Balance Sheet : Common-size balance sheet is prepared by stating the total assets as 100 and reducing individual assets into percentages of the total. Likewise, individual liability items are expressed as percentage of the total liabilities. Thus, the common-size balance sheet percentages show the ratio of each asset item to total assets and of each liability and owner's equity item to total liabilities and owner's equity. Common-size balance sheet is illustrated below :

Illustration 4 : From the following conventional Balance Sheet of Mahendra Ltd. for the year ended 31st March, 2006, prepare common-size balance sheet for analysis.

Mahendra Ltd.

Balance Sheet *as on 31st March, 2006*

Liabilities	Rs.	Assets	Rs.
Equity Share Capital	2,50,000	Fixed Assets (net)	4,24,280
Preference Share Capital	1,00,000	Cash	49,000
Reserves	1,10,000	Debtors	1,00,000
Profit and Loss A/c	70,000	Stock	1,60,000
Current Liabilities	2,33,280	Bills Receivable	30,000
	7,63,280		7,63,280

Solution

Mahendra Limited

Common-size Balance Sheet *as on 31st March, 2006*

Particulars	Amount	Percent to Total
	Rs.	%
Net Assets		
Current Assets		
Cash	49,000	9.24
Debtors	1,00,000	18.87

Stock	1,60,000	30.19
Bills Receivable	30,000	5.66
Total Current Assets	3,39,000	63.96
Less : Current Liabilities	2,33,280	44.01
Net Working Capital	1,05,720	19.95
Fixed Assets (net)	4,24,280	80.05
	5,30,000	100.00
Shareholder's Fund		
Equity Share Capital	2,50,000	47.17
Preference Share Capital	1,00,000	18.87
Reserves	1,10,000	20.75
Profit and Loss Account	70,000	13.21
	5,30,000	100.00

Common-size Income Statement : The common-size income statement is designed to exhibit what proportion of the net sales has been absorbed by the various costs and expenses incurred by the enterprise, and the percentage that remains as net income. For preparing common-size income statement all items in the income statement are expressed in percentage form in term of the total sales. Common-size income statement is illustration below.

Illustration 5 : From the following information of Gajendra Ltd., prepare common-size income statement and comment on main changes.

	Rs.
Sales (less Returns)	2,53,800
Cost of Goods Sold	1,42,200
Selling Expenses	72,000
Administrative Expenses	18,400
Other Income : Dividend on Investments	2,600
Interest on Debentures	4,000
Income Tax	6,800

Solution

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Gajendra Ltd.
Common-Size Income Statement

</div>

Items	Amount	Percentage of Net Sales
	Rs.	(%)
Net Sales	2,53,800	100.00
Less: Cost of Goods Sold	1,42,200	56.00
Gross Profit (1)	1,11,600	44.00
Operating Expenses :		
Selling Expenses	72,000	28.4

Administrative Expenses		
Total Expenses (2)	18,400	7.2
Operating Profit (1 – 2)	90,400	35.6
Add :Other Income	21,200	8.4
Dividend on Investments		
	2,600	1.0
Less: Other Expenses	23,800	9.4
Interest on Debentures		
Net Profit before Tax	4,000	1.6
Income Tax	19,800	7.8
Net Profit after Tax	6,800	2.7
	13,000	5.1

Comparison of common-size statements of a single enterprise over the years is valuable in that it reveals the changing proportions of components within groups of assets and liabilities. However, care must be exercised in interpreting such changes and the trend which it discloses. *A study of common-size statement of the company with those of competitive company or the industry* would show whether or not the company is managing assets efficiently. An analysis of the pattern of distribution of liability reveals debt-equity position of the company. Too large a percentage of liabilities in relation to owner's equity shows debt pressure for the company and a relatively low margin of safety for creditors.

TREND ANALYSIS

This method of analysis studies the percentage relationship that each item of the financial statement bears to the same item in the base year. Through this analysis the analyst seeks to review changes that have taken place in individual categories either in from year to year and over the years. Thus, trend analyis can take the form of trend percentages and trend ratios. *Trend percentage* show the percentage increase or decrease in each item for all other years from the earliest year or any one year as base.

Trend percentages are not suitable for comparison because they contain plus (+) and minus (–) signs. Hence, trend ratios are calculated for which current year's value is decided by base year's value and is multiplied by 100. These *trend ratios* are the price index numbers which indicate the movements or fluctuations in various financial facts of the business. This has been explained in the illustration given below :

Illustration 6 : The financial statements of RBSA Ltd disclose the following data regarding inventories, receivables and sales for the past five years.

Year	Sales (Rs.)	Inventories (Rs.)	Receivables
31st March, 2004	3,00,000	1,00,000	50,000
31st March, 2005	3,25,000	1,50,000	75,000
31st March, 2006	3,50,000	2,00,000	1,00,000
31st March, 2007	3,60,000	2,50,000	1,25,000
31st March, 2008	3,75,000	2,90,000	1,50,000

Calculate trend ratios of the above and comment on it.

Solution

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RBSA Ltd.
Computation of Trend Ratios

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Year	Sales (Rs.)	Inventories (Rs.)	Receivables
31st March, 2004	100.0	100	100
31st March, 2005	108.3	150	150
31st March, 2006	116.7	200	200
31st March, 2007	120.0	250	250
31st March, 2008	125.0	290	300

A close look into the trend percentage of sales, inventories and receivables reveals that they have tended to increase. Study of the trends of each of the above variables in isolation of the other will not be valuable. However, the comparisons of related trends will lead the analyst to draw invaluable conclusion about the state of affairs of the RBSA Ltd. Thus. rising trend of sale coupled with more pronounced increasing tendency in inventories and receivables reflects an unfavourable condition. Such a situation would indicate an over investment in inventories and receivables which may be attributable to inefficient inventory and credit management of the company.

FUND FLOW ANALYSIS

The balance sheet gives a static picture of the company's position on a particular date. It does not reveal the changes that have occurred in the financial position of the unit over a period of time. The investor should know, *(a)* How are the profits utilised?; *(b)* Financial source of dividend; *(c)* Source of finance for capital expenditures; *(d)* Source of finance for repayment of debt; *(e)* The destiny of the sale proceeds of the fixed assets; and *(f)* Use of the proceeds of the share or debenture issue or fixed deposits raised from public.

These items of information are provided in the funds flow statement. It is a statement of the sources and applications of funds. It highlights the changes in the financial condition of a business enterprise between two balance sheet dates. The investor could see clearly the amount of funds generated or lost in operations. He could see how these funds have been divided into three significant uses like taxes, dividends and reserves. Moreover, the application of long term funds towards the acquisition of current assets can be found out. This would reveal the real picture of the financial position of the company.

CASH FLOW STATEMENT

The investor is interested in knowing the cash inflow and outflow of the enterprise. The cash flow statement is prepared with the help of balance sheet, income statement and some additional information. Cash flows related to : (i) operating activities; (ii) financing activities; and (iii) investing activities are calculated. The statement shows the causes of changes in cash balance between two balance sheet dates. With the help of this statement, the investor can reviews the cash movements over an operating cycle. The factors responsible for the reduction of cash balances in spite of increase in profits or vice versa can be found out.

RATIO ANALYSIS

Ratio analysis is one of the most important technique for financial analysis. A ratio is an expression relating to one number to another. It is effectively used as tool by an investor for interpretation of financial statements. because ratios describe the significant relationship that exists between figures shown on a balance sheet, in a profit and loss account or in any part of a financial statement. Ratios can broadly be classified into your groups as follows :

- Liquidity Ratios;
- Solvency or Leverage or Capital Structure Ratios;
- Efficiency or Activity or Turnover Ratios;
- Profitability Ratios.

A brief description (important ratios) of all these types is given hereunder (For detailed discussion student are advised to refer Chapter 9 in author's book 'Management Accounting-I')

Liquidity Ratios

Liquidity ratios measure the ability of a firm to meet its short-term obligations, and reflect its short-term financial strength or solvency. Important liquidity ratios are (i) Current ratio; (ii) Liquid or quick or acid test ratio.

(1) **Current ratio** is the ratio of total current assets to total current liabilities and calculated as :

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

A satisfactory current ratio i.e. 2:1 indicates a firm's ability to meet its obligations, even if the value of current assets declines.

(2) **Quick or liquid or acid test ratio** represents the relationship between liquid or quick assets and current liabilities or liquid assets and liquid liabilities. Liquid or quick assets mean current assets reduced by inventories and pre-paid expenses. Quick liabilities means current liabilities reduced by bank overdraft and cash credit balance. The formula is :

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

This ratio shows the extent to which liquid assets are available for discharging current liabilities. The standard ratio is 1:1. It is a rigorous measure and also superior to the current ratio. However, both these ratios should be used to analyse liquidity of a company.

Solvency or Leverage or Capital Structure Ratios

These ratios through light on long-term solvency of the company. This reflects its ability to assure long-term creditors with regard to periodical payments of interest and the repayment of loan on maturity or in predetermined instalments on due dates. There are two types of such ratios viz. (i) Debt-equity ratio, and (ii) coverage ratio.

(1) **Debt-equity ratio** is computed from the balance sheet and reflects the relative contribution or stake of owners and third parties in financing the assets of the company. In other words, this ratio reflect the safety margin to the long-term creditors. This ratio is calculated as :

$$\text{Debt-equity Ratio} = \frac{\text{Total Debts}}{\text{Shareholders Funds or Net Worth}}$$

(2)   *Coverage ratio* is based on the income statement and shows the number of times the fixed obligations are covered by earnings before interest and taxes. It indicates the extent to which a fall in operating profits is tolerable so that the ability to pay would not be adversely affected. This ratio is calculated as :

$$\text{Coverage Ratio} = \frac{\text{Net Profit before Interest and Taxes}}{\text{Fixed Interest Charges}}$$

Efficiency or Activity or Turnover Ratios

These are concerned with measuring the efficiency in assets management. The efficiency with which assets are used is reflected in the speed and rapidity with which they are converted into sales. Hence, these ratios are called *'turnover ratios'* or *'assets management ratios'*. Thus, this activity ratios are a test of the relationship between cost of goods sold/sales and the various assets (inventory, receivables/debtors, total assets). Depending upon the type of assets, activity ratios may be (i) inventory turnover, (ii) receivables/debtors turnover, and (iii) total assets turnover.

(1)   *Inventory turnover* indicates the number of times an inventory is replacted during the year or how quickly the goods are sold. It is a test of inventory management. It is calculated as :

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold/Sales}}{\text{Average Inventory}}$$

This ratios indicates as to how many times inventories are sold and replaced in particular span of time. It shows the velocity of stock and indicates bear business or bull business.

(2)   *Receivable/Debtors turnover* is indicative of the efficiency of receivables management. It indicates the number of times the receivables are turned over in relation to sales during the year. It is calculated as :

$$\text{Debtors Turnover} = \frac{\text{Net Credit Sales}}{\text{Average Receivables (Drs. + B/R)}}$$

This ratio shows, how quickly debtors are converted into cash. This helps the management to find out how many days average sales are locked up in the amount of debtors.

(3)   *Total asset turnover* reveals the efficiency in managing and utilising the total assets. This ratio expresses the relationship between cost of goods sold or net sales and the total assets (fixed and current) of the firm. It is calculated as

$$\text{Total Assets Turnover} = \frac{\text{Cost of Goods Sold or Net Sales}}{\text{Total Assets}}$$

This ratio indicates, whether the total assets are being fully utilised. High ratio indicates over-trading, whereas low ratio suggests idle capacity and excessive investment in assets.

Profitability Ratios

The profitability of a firm can be measured by the profitability ratios. The firm's ability to earn maximum profit by the best utilisation of its resources is called profitability which depends on quantum of sales, cost of production and use of financial resources. Profitability ratios can be computed either from sales or investments. The profitability ratios based on sales are (i) profit margin (gross and net profit), (ii) expenses or operating ratios. They indicate the proportion of sales consumed by operating costs; and the proportion available to meet financial and other expenses.