

## A Study on New Trends in Ebit Eps Analysis on Capital Structure

Dr.I.Satyanarayana<sup>1</sup>, N.B.C. Sidhu\*<sup>2</sup>, P Indraja<sup>3</sup> (15X31E0020)

1.Principal, Sri Indu institute of Engineering & Technology, Sheriguda, Ibrahimpatnam,Telangana, India.

2.Assoc. Prof & HOD, Dept. of Master of Business Administration, Sri Indu Institute of Engineering & Technology, Sheriguda, Ibrahimpatnam, Telangna, India.

3.Student, Dept. of Master of Business Administration, Sri Indu Institute of Engineering & Technology, Sheriguda, Ibrahimpatnam, Telangna, India.

### **Abstract:**

*The term capital structure refers to the percentage of capital (money) at work in a business by type. Broadly speaking, there are two forms of capital: equity capital and debt capital. It refers to the mix of long-term sources of funds, such as debentures, long-term debt, preference share capital and equity share capital including reserves and surpluses. Each has its own benefits and drawbacks and a substantial part of wise corporate. The optimum capital structure is obtained when the market value per share is maximum. The issue of optimum capital structure has been theoretical. In practice, the determination of an optimum capital structure is a formidable task, and one has to go beyond theory. Since a number of factors influence the capital structure decision of a company, the judgment of the person making the capital structures if the decision plays a crucial par.*

**Keywords:** Financial Markets and functions, financial Policy, Capital Markets, Structure of Capital.....etc

**Introduction:** The term capital structure refers to the percentage of capital (money) at work in a business by type. Broadly speaking, there are two forms of capital: equity capital and debt capital. It refers to the mix of long-term sources of funds, such as debentures, long-term debt, preference share capital and equity share capital including reserves and surpluses. Each has its own benefits and drawbacks and a substantial part of wise corporate. The optimum capital structure is obtained when the market value per share is maximum. The issue of optimum capital structure has been theoretical. In practice, the determination of an optimum capital structure is a formidable task, and one has to go beyond theory. Since a number of factors influence the capital structure decision of a company, the judgment of the person making the capital structures if the decision plays a crucial par.

The key division in capital structure is between debt and equity. The proportion of debt funding is measured by gearing. This simple division is somewhat complicated by the existence of other types of capital that blur the lines between debt and equity, as they are hybrids of the two.

Preference shares are legally shares, but have a fixed return that makes them closer to debt than equity in their economic effect. Convertible debt may be likely to become equity in the future.

Considering the division between debt and equity is sufficient to understand the issues involved. Simple financial theory models show that capital structure does not affect the total value (*debt + equity*) of a company. This is not completely true, as more sophisticated models show. It is, nonetheless, an important result, know as capital structure irrelevance.

### **EBIT – EPS Approach:**

The profitability of the common share holder's investment can also be measured in many other ways; one such measure is to calculate the Earnings per Share. The Earnings per Share is calculated by dividing the profit after taxes by the total number of common shares outstanding.

Because of its effect on the earnings per share, financial leverage is an important consideration in planning the capital structure of a company. The companies with high level of the earnings before interest and taxes (EBIT) can make profitable use of the high degree of leverage to increase return on the shareholders' equity. One common method of examining the impact of leverage is to analyses the relationship between EPS and various possible levels of EBIT under alternative methods of financing.

The value of the firm depends upon its expected earnings stream and the rate used to discount this stream. The rate used to discount earnings stream it's the firm's required rate of return or the cost of capital. Thus, the capital structure decision can affect the value of the firm either by changing the expected earnings of the firm, but it can affect the reside earnings of the shareholders. The effect of leverage on the cost of capital is not very clear. Conflicting opinions have been expressed on this issue. In fact, this issue is one of the most continuous areas in the theory of finance, and perhaps more theoretical and empirical work has been done on this subject than any other.

If leverage affects the cost of capital and the value of the firm, an optimum capital structure would be obtained at that combination of debt and equity that maximizes the

total value of the firm or minimizes the weighted average cost of capital

Capital structure is a business finance term that describes the proportion of a company's capital, or operating money, that is obtained through debt and equity. Debt includes loans and other types of credit that must be repaid in the future, usually with interest. Equity involves selling a partial interest in the company to investors, usually in the form of stock. In contrast to debt financing, equity financing does not involve a direct obligation to repay the funds. Instead, equity investors become part-owners and partners in the business, and thus are able to exercise some degree of control over how it is run.

Since capital is expensive for small businesses, it is particularly important for small business owners to determine a target capital structure for their firms. Capital structure decisions are complex ones that involve weighing a variety of factors. In general, companies that tend to have stable sales levels, assets that make good collateral for loans, and a high growth rate can use debt more heavily than other companies. On the other hand, companies that have conservative management, high profitability, or poor credit ratings may wish to rely on equity capital instead.

The financial structure of an enterprise is shown by the left hand side (liabilities plus equity) of the balance sheet. Traditionally, short-term borrowings are excluded from the list of methods of financing the firm's capital expenditure, and therefore, the long term claims are said to form the capital structure of the enterprise. The capital structure is used to represent the proportionate relationship between debt and equity. Equity includes paid-up share capital, share premium and reserves and surplus.

The financing or capital structure decision is a significant managerial decision. It influences the shareholders returns and risk consequently; the market value of share may be affected by the capital structure decision. Some companies do not plan their capital structure, and it develops as a result of the financial decisions taken by the financial manager without any formal planning. With unplanned capital structure, these companies may also fail to economize the use of their funds. Consequently, it is being increasingly realized that a company should plan its capital structure to maximize the use of the funds and to be able to adapt more easily to the changing conditions. The company will have to plan its capital structure initially at the time of its promotion.

#### **FACTORS AFFECTING THE CAPITAL STRUCTURE**

##### **LEVERAGE**

The use of fixed charges of funds such as preference shares, debentures and term-loans along with equity capital structure is described as financial leverage or

trading on. Equity. The term trading on equity is used because for raising debt.

##### **DEBT /EQUITY RATIO**

Financial institutions while sanctioning long-term loans insists that companies should generally have a debt – equity ratio of 2:1 for medium and large scale industries and 3:1 indicates that for every unit of equity the company has, it can raise 2 units of debt. The debt-equity ratio indicates the relative proportions of capital contribution by creditors and shareholders.

##### **EBIT-EPS ANALYSIS**

In our research for an appropriate capital structure we need to understand how sensitive is EPS (earnings per share) to change in EBIT (earnings before interest and taxes) under different financing alternatives.

The other factors that should be considered whenever a capital structure decision is taken are

- Cost of capital.
- Cash flow projections of the company.
- Size of the company.
- Dilution of control .
- Floatation costs.

##### **FEATURES OF AN OPTIMAL CAPITAL STRUCTURE**

An optimal capital structure should have the following features,

##### **PROFITABILITY**

The Company should make maximum use of leverages at a minimum cost

##### **FLEXIBILITY**

The capital structure should be flexible to be able to meet the changing conditions. The company should be able to raise funds whenever the need arises and costly to continue with particular sources.

##### **CONTROL**

The capital structure should involve minimum dilution of control of the company.

##### **SOLVENCY**

The use of excessive debt threatens the solvency of the company. In a high interest rate environment, Indian companies are beginning to realize the advantage of low debt.

##### **CAPITAL STRUCTURE AND FIRM VALUE**

Since the objective of financial management is to maximize shareholders wealth, the key issue is: what is the relationship between capital structure and firm value? Alternatively, what is the relationship between capital structure and cost of capital? Remember that valuation and cost of capital are inversely related. Given a certain level of earnings, the value of the firm is maximized when the cost of capital is minimized and vice versa.

There are different views on how capital structure influences value. Some argue that there is no relationship what so ever between capital structure and firm value;

other believe that financial leverage (i.e., the use of debt capital) has a positive effect on firm value up to a point and negative effect thereafter; still others contend that, other things being equal, greater the leverage, greater the value of the firm.

#### **CAPITAL STRUCTURE AND PLANNING**

Capital structure refers to the mix of long-term sources of funds. Such as debentures, long-term debt, preference share capital including reserves and surplus (i.e., retained earnings) The board of directors or the chief financial officer (CEO) of a company should develop an appropriate capital structure, which are most factors to the company. This can be done only when all those factors which are relevant to the company's capital structure decision are properly analysed and balanced.

The capital structure should be planned generally keeping in view the interests of the equity shareholders, being the owners of the company and the providers of risk capital (equity) would be concerned about the ways of financing a company's operations. However, the interests of other groups, such as employees, customers, creditors, society and government, should also be given reasonable consideration. When the company lays down its objective in terms of the shareholder's wealth maximization (SWM), it is generally compatible with the interests of other groups.

Thus while developing an appropriate capital structure for its company, the financial manager should inter alia aim at maximizing the long-term market price per share. Theoretically, there may be a precise point or range within an industry there may be a range of an appropriate capital structure with in which there would not be great differences in the market value per share. One way to get an idea of this range is to observe the capital structure patterns of companies' vis-à-vis their market prices of shares.

#### **FEATURES OF AN APPROPRIATE CAPITAL STRUCTURE**

The board of Director or the chief financial officer (CEO) of a company should develop an appropriate capital structure, which is most advantageous to the company. This can be done only when all those factors, which are relevant to the company's capital structure decision, are properly analyzed and balanced. The capital structure should be planned generally keeping in view the interest of the equity shareholders and financial requirements of the company.

The equity shareholders being the shareholders of the company and the providers of the risk capital (equity) would be concerned about the ways of financing a company's operation. However, the interests of the other groups, such as employees, customer, creditors, and government, should also be given reasonable consideration. When the company lay down its objectives

in terms of the shareholders wealth maximizing (SWM), it is generally compatible with the interest of the other groups. Thus, while developing an appropriate capital structure for it company, the financial manager should inter alia aim at maximizing the long-term market price per share. Theoretically there may be a precise point of range with in which the market value per share is maximum.

In practice for most companies with in an industry there may be a range of appropriate capital structure with in which there would not be great differences in the market value per share. One way to get an idea of this range is to observe the capital structure patterns of companies' Vis-a Vis their market prices of shares. It may be found empirically that there is no significance in the differences in the share value with in a given range. The management of the company may fit its capital structure near the top of its range in order to make of maximum use of favorable leverage, subject to other requirement (SEBI) and stock exchange.

#### **SOUND OR APPROPRIATE CAPITAL STRUCTURE SHOULD HAVE THE FOLLOWING FEATURES**

##### **RETURN**

The capital structure of the company should be most advantageous, subject to the other considerations; it should generate maximum returns to the shareholders without adding additional cost to them.

##### **RISK**

The use of excessive debt threatens the solvency of the company. To the point debt does not add significant risk it should be used otherwise it uses should be avoided.

##### **FLEXIBILITY**

The capital structure should be flexibility. It should be possible to the company adopt its capital structure and cost and delay, if warranted by a changed situation. It should also be possible for a company to provide funds whenever needed to finance its profitable activities.

##### **CAPACITY**

The capital structure should be determined within the debt capacity of the company and this capacity should not be exceeded. The debt capacity of the company depends on its ability to generate future cash flows. It should have enough cash flows to pay creditors, fixed charges and principal sum.

##### **CONTROL**

The capital structure should involve minimum risk of loss of control of the company. The owner of the closely held company's of particularly concerned about dilution of the control.

#### **APPROACHES TO ESTABLISH APPROPRIATE CAPITAL STRUCTURE**

The capital structure will be planned initially when a company is incorporated .The initial capital structure

should be designed very carefully. The management of the company should set a target capital structure and the subsequent financing decision should be made with the a view to achieve the target capital structure .The financial manager has also to deal with an existing capital structure .The company needs funds to finance its activities continuously. Every time when fund shave to be procured, the financial manager weighs the pros and cons of various sources of finance and selects the most advantageous sources keeping in the view the target capital structure. Thus, the capital structure decision is a continues one and has to be taken whenever a firm needs additional Finances.

The following are the three most important approaches to decide about a firm's capital structure.

- EBIT-EPS approach for analyzing the impact of debt on EPS.
- Valuation approach for determining the impact of debt on the shareholder's value.
- Cash flow approached for analyzing the firm's ability to service debt.

In addition to these approaches governing the capital structure decisions, many other factors such as control, flexibility, or marketability are also considered in practice.

#### **EBIT-EPS APPROACH**

We shall emphasize some of the main conclusions here .The use of fixed cost sources of finance, such as debt and preference share capital to finance the assets of the company, is known as financial leverage or trading on equity. If the assets financed with the use of debt yield a return greater than the cost of debt, the earnings per share also increases without an increase in the owner's investment. The earnings per share also increase when the preference share capital is used to acquire the assets. But the leverage impact is more pronounced in case of debt because

- The cost of debt is usually lower than the cost of performance share capital. And,
- The interest paired on debt is tax deductible.

Because of its effect on the earnings per share, financial leverage is an important consideration in planning the capital structure of a company. The companies with high level of the earnings before interest and taxes (EBIT) can make profitable use of the high degree of leverage to increase return on the shareholder's equity. One common method of examining the impact of leverage is to analyze the relationship between EPS and various possible levels of EBIT under alternative methods of financing.

The EBIT-EPS analysis is an important tool in the hands of financial manager to get an insight into the firm's capital structure management .He can considered the possible fluctuations in EBIT and examine their impact on EPS under different financial plans of the probability of earning

a rate of return on the firm's assets less than the cost of debt is insignificant, a large amount of debt can be used by the firm to increase the earning for share.

This may have a favorable effect on the market value per share. On the other hand, if the probability of earning a rate of return on the firm's assets less than the cost of debt is very high, the firm should refrain from employing debt capital .It may, thus, be concluded that the greater the level of EBIT and lower the probability of down word fluctuation, the more beneficial it is to employ debt in the capital structure However, it should be realized that the EBIT EPS is a first step in deciding about a firm's capital structure .It suffers from certain limitations and doesn't provide unambiguous guide in determining the capital structure of a firm in practice.

#### **FINANCIAL LEVERAGE:**

##### **INTRODUCTION**

Leverage, a very general concept, represents influence or power. In financial analysis leverage represents the influence of a financial variable over same other related financial variable.

Financial leverage is related to the financing activities of a firm. The sources from which funds can be raised by a firm, from the viewpoint of the cost can be categorized into

Those, which carry a fixed finance charge.

Those, which do not carry a fixed charge.

The sources of funds in the first category consists of various types of long term debt including loans, bonds, debentures, preference share etc., these long-term debts carry a fixed rate of interest which is a contractual obligation for the company except in the case of preference shares. The equity holders are entitled to the remainder of operating profits if any Financial leverage results from presence of fixed financial charges in eh firm's income stream. These fixed charges don't vary with EBIT or operating profits. They have to be paid regardless of EBIT availability. Past payment balances belong to equity holders.

Financial leverage is concerned with the effect of changes I the EBIT on the earnings available to shareholders.

##### **DEFINITION**

Financial leverage is the ability of the firm to use fixed financial charges to magnify the effects of changes in EBIT on EPS i.e., financial leverage involves the use of funds obtained at fixed cost in the hope of increasing the return to shareholder.

The favorable leverage occurs when the Firm earns more on the assets purchase with the funds than the fixed costs of their use. The adverse business conditions, this fixed charge could be a burden and pulled down the companies wealth.

##### **MEANING OF FINANCIAL LEVERAGE**

As stated earlier a company can finance its investments by debt/equity. The company may also use preference capital. The rate of interest on debt is fixed, irrespective of the company's rate of return on assets. The company has a legal banding to pay interest on debt. The rate of preference dividend is also fixed, but preference dividend are paid when company earns profits. The ordinary shareholders are entitled to the residual income. That is, earnings after interest and taxes belong to them. The rate of equity dividend is not fixed and depends on the dividend policy of a company.

The use of the fixed charges, sources of funds such as debt and preference capital along with owners' equity in the capital structure, is described as "financial leverages" or "gearing" or "trading" or "equity". The use of a term trading on equity is derived from the fact that it is the owners equity that is used as a basis to raise debt, that is, the equity that is traded upon the supplier of the debt has limited participation in the company's profit and therefore, he will insist on protection in earnings and protection in values represented by owners equity's.

**FINANCIAL LEVERAGE AND THE SHAREHOLDERS RISK**  
Financial leverage magnifies the shareholders earnings we also find that the variability of EBIT causes EPS to fluctuate within wider ranges with debt in the capital structure that is with more debt EPS raises and falls faster than the rise and fall in EBIT. Thus financial leverage not only magnifies EPS but also increases its variability.

The variability of EBIT and EPs distinguish between two types of risk- operating risk and financial risk. The distinction between operating and financial risk was long ago recognized by Marshall in the following words.

#### **OPERATING RISK**

Operating risk can be defined as the variability of EBIT (or return on total assets). The environment internal and external in which a firm operates determines the variability of EBIT. So long as the environment is given to the firm, operating risk is an unavoidable risk. A firm is better placed to face such risk if it can predict it with a fair degree of accuracy.

#### **THE VARIABILITY OF EBIT HAS TWO COMPONENTS**

- Variability of sales
- Variability of expense

#### **VARIABILITY OF SALES**

The variability of sales revenue is in fact a major determinant of operating risk. Sales of a company may fluctuate because of three reasons. First the changes in general economic conditions may affect the level of business activity. Business cycle is an economic phenomenon, which affects sales of all companies. Second certain events affect sales of company belonging to a particular industry for example the general economic

condition may be good but a particular industry may be hit by recession, other factors may include the availability of raw materials, technological changes, action of competitors, industrial relations, shifts in consumer preferences and so on. Third sales may also be affected by the factors, which are internal to the company. The change in management the product market decision of the company and its investment policy or strike in the company has a great influence on the company's sales.

#### **VARIABILITY OF EXPENSES**

Given the variability of sales the variability of EBIT is further affected by the composition of fixed and variable expenses. Higher the proportion of fixed expenses relative to variable expenses, higher the degree of operating leverage. The operating leverage affects EBIT. High operating leverage leads to faster increase in EBIT when sales are rising. In bad times when sales are falling high operating leverage becomes a nuisance; EBIT declines at a greater rate than fall in sales. Operating leverage causes wide fluctuations in EBIT with varying sales. Operating expenses may also vary on account of changes in input prices and may also contribute to the variability of EBIT.

#### **FINANCIAL RISK**

For a given degree of variability of EBIT the variability of EPS and ROE increases with more financial leverage. The variability of EPS caused by the use of financial leverage is called "financial risk". Firms exposed to same degree of operating risk can differ with respect to financial risk when they finance their assets differently. A totally equity financed firm will have no financial risk. But when debt is used the firm adds financial risk. Financial risk is this avoidable risk if the firm decides not to use any debt in its capital structure.

#### **MEASURES OF FINANCIAL LEVERAGE**

The most commonly used measured of financial leverage are:

Debt ratio: the ratio of debt to total capital, i.e.,

$$L_1 = \frac{D}{D+S} = \frac{D}{V}$$

Where, D is value of debt, S is value of equity and V is value of total capital D and S may be measured in terms of book value or market value. The book value of equity is called net worth.

Debt-equity ratio: The ratio of debt to equity, i.e.,

$$L_2 = \frac{D}{S}$$

Interest coverage: the ration of net operating income (or EBIT) to interest charges, i.e.,

$$L_3 = \frac{\text{EBIT}}{\text{Interest}}$$

The first two measures of financial leverage can be expressed in terms of book or market values. The market value to financial leverage is the erotically more appropriate because market values reflect the current altitude of investors. But, it is difficult to get reliable information on market values in practice. The market values of securities fluctuate quite frequently.

There is no difference between the first two measures of financial leverage in operational terms. They are related to each other in the following manner.

$$L_1 = \frac{L_2}{1 + L_2} = \frac{D \setminus S}{1 + D \setminus S} = \frac{D}{V}$$

$$L_2 = \frac{L_1}{1 - L_1} = \frac{D \setminus V}{1 - D \setminus V} = \frac{D}{S}$$

These relationships indicate that both these measures of financial leverage will rank companies in the same order. However, the first measure (i.e., D/V) is more specific as its value ranges between zeros to one. The value of the second measure (i.e., D/S) may vary from zero to any large number. The debt-equity ratio, as a measure of financial leverage, is more popular in practice. There is usually an accepted industry standard to which the company's debt-equity ratio is compared. The company will be considered risky if its debt-equity ratio exceeds the industry-standard. Financial institutions and banks in India also focus on debt-equity ratio in their lending decisions.

The first two measures of financial leverage are also measures of capital gearing. They are static in nature as they show the borrowing position of the company at a point of time. These measures thus fail to reflect the level of financial risk, which inherent in the possible failure of the company to pay interest repay debt. The third measure of financial leverage, commonly known as coverage ratio, indicates the capacity of the company to meet fixed financial charges. The reciprocal of interest coverage that is interest divided by EBIT is a measure of the firm's incoming gearing. Again by comparing the company's coverage ratio with an accepted industry standard, the investors, can get an idea of financial risk .however, this measure suffers from certain limitations. First, to determine the company's ability to meet fixed financial

obligations, it is the cash flow information, which is relevant, not the reported earnings.

During recessional economic conditions, there can be wide disparity between the earnings and the net cash flows generated from operations. Second, this ratio, when calculated on past earnings, does not provide any guide regarding the future risky ness of the company. Third, it is only a measure of short-term liquidity than of leverage.

#### FINANCIAL LEVERAGE AND THE SHARE HOLDER'S RETURN

The primary motive of a company in using financial leverage is to magnify the shareholder's return under favorable economic conditions. The role of financial leverage in magnifying the return of the shareholders is based under assumption that the fixed charges funds (such as the loan from financial institutions and other sources or debentures) can be obtained at a cost lower than the firm's rate of return on net assets.

the difference between the earnings generalized by assets financed by the fixed charges funds and cost of these funds is distributed to the shareholders, the earnings per share (EPS) or return on equity increase. However, EPS or ROE will fall if the company obtains the fixed charges funds at a cost higher than the rate of return on the firm's assets. It should, there fore, be clear that EPS, ROE and ROI are the important figures for analyzing the impact of financial leverage.

#### COMBINED EFFECT OF OPERATING AND FINANCIAL LEVERAGES

Operating and financial leverages together cause wide fluctuations in EPS for a given change in sales. If a company employs a high level of operating and financial leverage, even a small change in the level of sales will have dramatic effect on EPS. A company with cyclical sales will have a fluctuating EPS; but the swings in EPS will be more pronounced if the company also uses a high amount of operating and financial leverage.

The degree of operating and financial leverage can be combined to see the effect of total leverage on EPS associated with a given change in sales. The degree of combined leverage (DCL) is given by the following equation:

$$DCL = \frac{\% \text{ Change in EBIT}}{\% \text{ Change in Sales}} \times \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}} = \frac{\% \text{ Change in EPS}}{\% \text{ Change in Sales}}$$

Yet another way of expressing the degree of combined leverage is as follows:

$$DCL = \frac{Q(S-V)}{Q(S-V)-F} \times \frac{Q(S-V)-F}{Q(S-V)-F-INT} = \frac{Q(S-V)}{Q(S-V)-F-INT}$$

Since  $Q(S-V)$  is contribution and  $Q(S-V)-F-INT$  is the profit after interest but before taxes, Equation 2 can also be written as follows:

$$DCL = \frac{\text{Contribution}}{\text{PBT}}$$

### Cash Flow Analysis versus EBIT-EPS Analysis

Is cash flow analysis superior to EBIT-EPS analysis? How does it incorporate the insights of the finance theory? The cash flow analysis has the following advantages over EBIT-EPS analysis.

- It focuses on the liquidity and solvency of the firm over a long-period of time, even encompassing adverse circumstances. Thus, it evaluates the firm's ability to meet fixed obligations.
- It goes beyond the analysis of profit and loss statement and also considers changes in the balance sheet items.
- It identifies discretionary cash flows. The firms can thus prepare an action plan to face adverse situations.
- It provides a list of potential financial flows which can be utilized under emergent.
- It is long-term dynamic analysis and does not remain confined to a single period analysis.

The most significant advantage of the cash flow analysis is that it provides a practical way of incorporating the insights of the finance theory. As per the theory, debt financing has tax advantage. But it also involves risk of financial distress. Therefore, the optimum about of debt depends on the trade-off between tax advantage of debt and risk of financial distress.

### Cash Flow Analysis versus Debt-Equity Ratio

The cash flow analysis clearly reveals that a higher debt-equity ratio is not risky if the company has the ability of generating substantial cash inflows in the future to meet its fixed financial obligations. Financial risk in this sense is indicated by the company's cash-flow ability, not by the debt-equity ratio. The analysis of debt-to-equity ratios alone can be deceiving, and analysis of the magnitude and stability of cash-flows relative to fixed charges is extremely important in determining the appropriate capital structure for the firm

India, the second largest producer of cement in the world after china. The cement Industry comprises of 128 large cement plants with an installed capacity of 148.28 million tones and more than 300 mini cement plant with an estimated capacity of 11.10 million tones per annum. The cement corporation of India, which is central public sector undertaking, has 10 units. There are 10 large cement plants owned by various state Governments. The total installed capacity in the country as a whole is 159.38 million tones. Actual cement production in 2002-03 was 116.35 million tones as against a production of 106.90 million tones in 2001-02, registering a growth rate of 8.84%.

Keeping in view the trend of growth of the industry in previous years, a production Target of 126 million tones has fixed for the year 2003-04. During the period April-June 2003, a production (provisional) was 31.30 million tones. The industry has achieved a growth rate of 4.86 per cent during this period.

With the government of India giving boost to various infrastructure projects, housing facilities and road networks, the cement industry in India is currently growing at an enviable pace. More growth in the Indian cement industry is expected in the coming years. It is also predicted that the cement production in India would rise to 236.16 MT in FY11. It's also expected to rise to 262.61 MT in FY12.

The cement industry in India is dominated by around 20 companies, which account for almost 70% of the total cement production in India. In the present year, the Indian cement companies have produced 11 MT cement during April-September 2009. It took the total cement production in FY09 to 231 MT.

An increased outflow in infrastructure sector, by the government as well as private builders, has raised a significant demand of cement in India. It is the key raw material in construction industry. Also, it has highly influenced those bigger companies to participate in the growing sector. At least 125 plants set up by the big companies in India with about 300 other small scale cement manufacturers, to fulfill the growing demand of cement. Being one of the vital industries, the cement industry contributes to the nation's socioeconomic development. The sum total utilization of cement in a year indicates the country's economic growth.

Cement plant was first set up in Calcutta, in 1889. At that time, the cement used to manufacture from Argillaceous. In 1904, the first organized set up to

manufacture cement was commenced in Madras, which was named South India Industries Limited. Again in 1914, another cement manufacturing unit was set up in Porbandar, Gujarat, but this time it was licensed. In the early years of that era, the demand for the cement tremendously exceeded but only after few years, the industry faced a severe downfall. To overcome from this the worsening situation, the Concrete Association of India was founded in 1927. The organization has two prime goals, one was to create awareness about utility of cement and another was to encourage cement utilization.

Even after the independence, the growth of the cement industry was too gradual. In the year 1956, a Distribution Control System was established with an objective to provide Indian manufacturers and consumers self sufficiency. Indian government then introduced a quota system to provide an impetus to this industry, in which 66% of the sales was imposed to government or small real estate developers. After the implementation of quota, the cement industry tasted a sudden growth and profitability in India. In 1991, the government de-licensed the cement industry. The growth of the industry accelerated forthwith and majority of the industrialists invested heavily in the industry with the awarded freedom.

The industry started focusing on export also to double the opportunity available for it in global markets. Today, the cement manufacturers in India have transformed into leading Indian exporters of cement across the world. The demand of cement in year 2009-2010 is expected to increase by 50 million tons despite of the recession and decline in demand of housing sector. Against India's GDP growth of 7%, the experts have estimated the cement sector to grow by 9 to 10 % in the current financial year. Major Indian cement manufacturers and exporters have all made huge investments in the last few months to increase their production capability. This heralds an optimistic outlook for cement industry. The housing sector in India accounts for 50 % of the cement's demand. And the demand is expected to continue. With the constant effort made by cement manufacturers and exporters, India has become the second largest cement producer in the world. Madras Cement Ltd., Associated Cement Company Ltd (ACC), Ambuja Cements Ltd, Grasim Industries Ltd, and J.K Cement Ltd. are among few renowned names of the major Indian cement companies.

#### **INDUSTRY BACKGROUND**

The history of the cement industry in India dates back to the 1889 when a Kolkata-based company started manufacturing cement from Argillaceous. But the

industry started getting the organized shape in the early 1900s. In 1914, India cement company Ltd was established in Porbandar with a capacity of 10,000 tons and production of 1000 installed. The world war I gave the first initial thrust to the cement industry in India and the industry started growing at a fast rate in terms of production, manufacturing units, and installed capacity. This stage was referred to as the Nascent Stage of Indian Cement Industry. In 1927, Concrete Association of India was set up to create public awareness on the utility of cement as well as to propagate cement consumption.

The cement industry in India saw the price and distribution control system in the year 1956, established to ensure fair price model for consumers as well as manufacturers. Later in 1977, government authorized new manufacturing units (as well as existing units going for capacity enhancement) to put a higher price tag for their products. A couple of year's later, government introduced a three-tier pricing system with different pricing on cement produced in high, medium and low cost plants.

Cement industry, in any country, plays a major role in the growth of the nation. Cement industry in India was under full control and supervision of the government. However, it got relief at a large extent after the economic reform. But government interference, especially in the pricing, is still evident in India. In spite of being the second largest cement producer in the world, India falls in the list of lowest per capita consumption of cement with 125 kg. The reason behind this is the poor rural people who mostly live in mud huts and cannot afford to have the commodity. Despite the fact, the demand and supply of cement in India has grown up. In a fast developing economy like India, there is always large possibility of expansion of cement industry.

#### **CEMENT PRODUCTION AND GROWTH**

Domestic demand plays a major role in the fast growth of cement industry in India. In fact the domestic demand of cement has surpassed the economic growth rate of India. The cement consumption is expected to rise more than 22% by 2009-10 from 2007-08. In cement consumption, the state of Maharashtra leads the table with 12.18% consumption, followed by Uttar Pradesh. In terms of cement production, Andhra Pradesh leads the list with 14.72% of production, while Rajasthan remains at second position.

The production of cement in India grew at a rate of 9.1% during 2006-07 against the total production of 147.8 MT in the previous fiscal year. During April to October 2008-09, the production of cement in India was 101.04 MT comparing to 95.05 MT during the same period in the previous year. During October 2009, the total cement production in India was 12.37 MT compared to a production of 11.61 MT in the same month in the



previous year. The cement companies are also increasing their productions due to the high market demand. The cement companies have seen a net profit growth rate of 85%. With this huge success, the cement industry in India has contributed almost 8% to India's economic development.

### TECHNOLOGY UPGRADATION

Cement industry in India is currently going through a technological change as a lot of up gradation and assimilation is taking place. Currently, almost 93% of the total capacity is based entirely on the modern dry process, which is considered as more environment-friendly. Only the rest 7% uses old wet and semi-dry process technology. There is also a huge scope of waste heat recovery in the cement plant, which leads to reduction in the emission level and hence improves the environment. There is also a huge scope of waste heat recovery in the cement plants, which lead to reduction in the emission level and hence improves the environment.

### CEMENT DISPATCHES

Cement industry in India has successfully maintained almost total capacity utilization levels, which resulted in maintaining a 10% growth rate. In 2006-07, the total dispatch was 155 MT, which rose up to 170 MT in 2007-08. The month of October 2009 saw a cement dispatch of 12.22 MT, which was almost 9% higher than the total cement dispatch of 11.21 MT in the same month in the previous year.

PARTICULARS	2009-10(Apr-Oct) in MT	2008-09 (Apr-Oct) in MT
Production	101.04	95.05
Dispatches(Excluding Export)	100.24	94.33
Export	1.46	2.16
Capacity Utilization (%)	85	93

### Major Players in Indian Cement Industry

There are a number of players prevailing in the cement industry in India. However, there are around 20 big names that account for more than 70% of the total cement production in India. The total installed capacity is distributed over around 129 plants, owned by 54 major companies across the nation.

Following are some of the major names in the Indian cement industry:

Company	Production	Installed Capacity
ACC	17,902	18,640
Gujarat Ambuja	15,094	14,860
Ultratech	13,707	17,000
Grasim	14,649	14,115

India Cements	8,434	8,810
JK Group	6,174	6,680
Jaypee Group	6,316	6,531
Century	6,636	6,300
Madras Cements	4,550	5,470
Birla Corp.	5,150	5,113

### Mergers and Acquisitions in Cement Industry in India:

- UltraTech Cement is going to absorb its sister concern Samruddhi Cement to become biggest cement company in India.
- World's leading foreign funds like HSBC, ABN Amro, Fidelity, Emerging Market Fund and Asset Management Fund have together bought 7.5% of India Cements (ICL) at a cost of US\$ 124.91 million.
- Cimpor, a Cement company of Portugal, has bought 53.63% stake that Grasim Industries had in Shree Digvijay Cement.
- French cement company Vicat SA bought 6.67% share of Sagar Cement at a cost of US\$ 14.35 million.
- Holcim now holds 56% stake of Ambuja Cement. Previously it held 22% of stake. The company utilized various open market transactions to increase its stakes. It invested US\$ 1.8 billion for that.

### BIBLIOGRAPHY

- **Financial Management** : **Khan & Jain, 3<sup>rd</sup> Edition**
- **Financial Management** : **I.M. Pandey, 9<sup>th</sup> Edition**
- **Financial Management** : **Prasanna Chandra, 7<sup>th</sup> Edition**
- **World Wide Web** : **nclindustries.com**
- **News Papers** : **Financial Express,**
- **Economic Times.**
- **Websites** : **www.nclind.com**
- **www.google.com**