CHAPTER VI
FACTORS DETERMINING CAPITAL STRUCTURE

The empirical literature suggests a number of factors that may influence the financial structure of a company. As argued by Titman and Wessels (1988) and Harris and Reviv (1991), the choice of explanatory variables in the analysis of cross-sectional variation in capital structure is fraught with difficulty. Rajan and Zingales (1995) in their study of capital structure in the G-7 economies find gearing in the UK to be positively related to tangibility and the size of the company, but negatively related to the level of profitability and the market-to-book ratio. The results of Rajan and Zingales (1995) are highly dependent upon the precise definition of gearing being examined. Most of the empirical evidence on capital structure comes from studies of the determinants of corporate debt ratios e.g. Timi and Wessels (1988), Rajan and Zingales (1995), Graham (1996) and studies of issuing firms' debt vs. equity financing choice Marsh (1982), Jallilv and Harris (1984). Horakimian et al. (2003) have successfully identified characteristics such as size, R&D intensity, market-to-book ratio of assets, stock returns, asset tangibility, profitability and the marginal tax rate as important determinants of corporate financing choices. Baner (2004) examined the capital structure of listed companies in Visegrad countries (Czech Republic, Hungary, Poland and Slovak Republic). In his study, six potential determinants of capital structure are analyzed: size, profitability, tangibility, growth opportunities, non-debt tax shields and volatility.

The corporation size and capital structure have positive correlation but this kind of correlation is not significant. The positive impact of size on leverage is consistent with the results of many empirical studies (Rajan and Zingales, 1995; Booth et al.2001; Frank and Goyal, 2002). Retained profit is the quickest and easiest source of finance for most companies compared with new equity issuance due to the transaction costs associated with share issuance and the restrictions on firms’ operating performance for applying for new equity issuance. Furthermore, since the majority of new equity is issued through share allotments, new issues usually lead to a decline in the firm’s stock price. Therefore, retained profit is the preferred primary method of raising additional capital. Meanwhile, most of the management of the Chinese listed companies prefers equity financing rather than debt financing because the former is...
not binding as a company with higher profit are easily to obtain equity financing than those else wise.

Asset value and capital structure has distinct positive correlation; it can be interpreted by the theory of agency costs, bankruptcy theory and pecking order theory. And we can also get the same conclusion from the characters of capital structure in IT corporations. Liquidity and capital structure has negative correlation: if a company has more current assets, the fund can be used to invest instead of external short-term indebted fund. And this assumption is validated by the empirical study.

Development potential (measured by Profit growth rate) has negative correlation with capital structure, but it is not significant. Development potential is the accumulation capability. Though the trade-off theory and pecking order theory disagree on this point, both of them can explain the situation with IT corporations while the pecking order theory is more suitable. Growing opportunities and capital structure has negative correlation, but it is not significant.

According to the trade-off theory, firms’ future growth opportunities tends to borrow less than firms holding more tangible assets because growth opportunities cannot be collateralized. Further, agency theory argues that firms have a tendency to expropriate wealth from debt holders (Myers, 1977; Jensen, 1986). The high market capitalizations in China may also indicate that the growth opportunities associated with listed firms have been recognized by the capital market; therefore, banks are willing to assign higher valuations to highly levered firms and issue more long-term debt to finance the firms’ growth opportunities. Six traditional explanatory variables are adopted in the study, including size, profitability and tangibility, liquidity, and profit growth rate and growth opportunity. Linear regressions are used to study the effects of the factors. It is found that the size of companies is positively related to leverage, while growth and profitability, liquidity, profit growth rate and growth opportunity are negatively associated with leverage. (Yuanxin Liu & Jing Ren 2009).

**Determinants of Capital Structure Studies in India**

The value of a depends upon its expected earnings stream and the rate used to discount earnings stream is the firm’s required rate of return or the cost of capital. Thus the capital structure decision can affect the value of the either by changing the expected earnings or the cost of capital or both. Leverage cannot change the total
expected earnings of the firm, but it can affect the residual earnings of the shareholders. The effect of leverage on cost of capital is not very clear. Conflicting opinions have been expressed on this issue. In fact, this issue is the most contentious area in the theory of finance, and perhaps more theoretical and empirical work has been done on this subject than any other. Raising of funds to finances the firm’s investments is an important function of the financial manager. In practice, it is observed that financial managers use different combinations of debt and equity. A practical question therefore is: What motivates them to do so? More fundamental questions to be answered are: (1) Does use of debit create a value? (2) If so, do firms gravitate towards an optimum mix of debt and equity? In theory, it is argued that the financing decision is irrelevant under perfect capital markets. When, within the framework of perfect capital markets, taxes and bankruptcy costs are assumed, the financial economists argue that an optimum capital structure, which maximizes the market value of the firm or minimizes cost of capital, can exist. In developing countries like India, are found following different financing policies—some aggressive and some conservative. One needs to investigate into the causes of this behavior. Two Indian studies on the relationship between the cost of capital and the capital structure i.e., Sarma and Rao (1968) following Modigliani and Miller’s (M-M’s) 1966 article, employed a two-stage least square method on the data of 30 Indian engineering firms for three years. In their estimates, the leverage variable had a coefficient greater than the tax rate. Thus, agreeing with the traditional view, they concluded that the cost of capital is affected by debt apart from its tax advantages. Another study was conducted by Pandey (1981). He attempted to determine the empirical relationship between cost of capital and the capital structure using data of 4 industries viz., Cotton (47), chemicals (32), engineering (32), and electricity generation (20). Some studies have been conducted to ascertain the demerits of financial leverage under the Indian context. Bhatt’s (1980) paper concerned the impact of size, growth, business risk, dividend policy, profitability, debt service capacity and the degree of operating leverage on the leverage ratio of the firms’. The study used the multiple regression models to find out the contribution of each characteristic. Business risk (defined as earnings instability), profitability, dividend payout and debt service capacity were found to be significant determinants of the leverage ratio. The study used a sample of 62 companies from engineering industry. Pandey’s (1984) study about the corporate
managers’ attitude towards use of borrowings in India revealed that the practicing managers generally preferred to borrow instead of using other sources of funds because of low cost of debt due to the interest tax deductibility and the complicated procedures for raising the equity capital. In the light of the finding, Pandey (1985) conducted another empirical study examining the industrial trail patterns, trend, and volatilities of leverage and the impact of size, profitability, and growth of leverage. For this purpose, data of 743 companies in 18 industrial groups for the period 1973-74 to 1980-81 were analyzed. It was found that about 72 to 80 per cent of assets of sample companies were financed by external debt including current liabilities. Companies trade credit as much as bank borrowings. The level of leverage for all industries showed a noticeable increase after 1973-74. The study also indicated that classifying leverage percentages by the type of industry does not produce any patterns which may be regarded as systematic and significant. The trends and volatilities associated with the leverage percentages also did not give any support to the belief and the type of industry impact on the degree of leverage. It also revealed that there was some evidence of the tendency of large size companies to concentrate on the higher level of leverage. But it was difficult to say conclusively that size has an impact on the degree of leverage since a large number of smalls were also found employing high level of debt. The study also did not show a definite structural relationship between the degree of leverage, on the one hand and profitability and growth, on the other hand; although over time, profitability and growth have improved and so has the degree of leverage. The majority of the profitability and growth groups of companies were concentrated with narrow bands of leverage. Chakraborty (1977) has also conducted a study to investigate debt-equity ratio in the private corporate sector of India. He tested the relation of debt-equity ratio with age, total assets, retained earnings, profitability and capital intensity. He found that age, retained earnings and profitability were negatively correlated while total assets and capital intensity were positively correlated to debt-equity ratio. He also provided a glimpse of the regional patterns of debt-equity ratios in different industrial centers in India. He also attempted a prediction equation for debt-equity ratio for each industry. Distinguish between equity offerings that differed in corporate tax rates, relative size, underlying property type, pre-offer debt ratio and operational post-issue performance
and differences in price reactions depending on these factors (Dirk Brounen and Piet M.A. Eichholtz 2001).

Capital structure is one of the most complex areas of strategic financial decision making due to its interrelationship with macroeconomic variables.

In this chapter the study has been explained the factors which are determining the capital structure ratios, The study going to examined on some identified factors either they are determinants of capital structure or not, these factors are,

- Book value for share
- Earnings before interest and tax
- Earnings per share
- Financial leverage
- Operating leverage
- Gross interest leverage ratio
- Sales

A) Book value for share
A measure used by owners of common shares in a firm to determine the level of safety associated with each individual share after all debts are paid accordingly.
Book value per Share=\text{Total Shareholders’ Equity-Preferred Equity/Total outstanding shares.}

B) Earnings before Interest and Tax (EBIT)
Earnings Before Interest and Taxes (EBIT), also called operating profit or operating income is a measure of a firm's profit that excludes interest and income tax expenses. It is the difference between operating revenues and operating expenses. When a firm does not have non-operating income, then operating income is sometimes used as a synonym for EBIT and operating profit.
\text{EBIT = Revenue – Operating expenses + Non-operating income}

C) Earnings per share
The portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serve as an indicator of a company's profitability.
Calculated as:

\[
\text{Net Income - Dividends on Preferred Stock} \over \text{Average Outstanding Shares}
\]

When calculating, it is more accurate to use a weighted average number of shares outstanding over the reporting term, because the number of shares outstanding can change over time. However, data sources sometimes simplify the calculation by using the number of shares outstanding at the end of the period. Diluted EPS expands on basic EPS by including the shares of convertibles or warrants outstanding in the outstanding shares number.

**D) Gross interest coverage ratio (GICR)**

The gross interest coverage ratio is a measurement of the number of times a company could make its interest payments with its earnings before interest and taxes; the lower the ratio, the higher the company’s debt burden.

\[
\text{EBIT + Non – Operating Income} \over \text{Interest Paid}
\]

E) Financial leverage

Financial leverage is the degree to which a business is utilizing borrowed funds. Companies that are highly leveraged may be at risk of bankruptcy if they are unable to make payments on their debt; they may also be unable to find new lenders in the future. Financial leverage is not always risky, however; it can increase the shareholder’s return on their investment and often there is some tax advantages associated with borrowing.

Financial leverage is used as a measure of financial risk. The formula used to calculate financial leverage is as follows:

\[
\text{EBIT} \over \text{EBT}
\]

An analysis of data in terms of mean, median and quartile values of financial leverage of sample firms
F) Operating leverages
Operating leverage results from the presence of fixed costs that help in magnifying net operating income fluctuations from small variations in revenue. Operating leverage is influenced by demand variability, price variability and operating fixed costs. The present study uses operating leverage as a measure of business risk. The degree of operating leverage is calculated as follows:

\[
\text{Operating leverage} = \frac{\text{Contribution}}{\text{EBIT}}
\]

G) Sales
An established business which has a growing market and high sales turnover, the company is in position to meet fixed commitments. Interest on debentures has to be paid regardless of profit. Therefore, when sales are high, thereby the profits are high and company is in better position to meet such fixed commitments like interest on debentures and dividends on preference shares. If company is having unstable sales, then the company is not in position to meet fixed obligations. So, equity capital proves to be safe in such cases

The chapter has been organized into five parts, they are
Determinants in over all selected sample firms
Determinants in manufacturing industry
Determinants in service industry
Determinants in power industry
Determinants in mining industry

With the help of regression analysis the study examined the factors, which are factors are determining capital structure industry wise and with the help of correlation analysis study explained the correlation between capital structure ratios and theirs’ determinants industry wise.
Determinants of Capital structure practices of overall sample firms

A) Book value per share:
From the Table 6.22 data denotes that the book value per share in overall sample firms was negative in the years 1990-91 and 91-92. Initially the mean value of the firms Book value per share was 16.17 in the year 1992-93 and 29 in the year 1993-94. It gradually increased to 72.14 in the year 1997-98 with slight changes it was 77.73 in the year 2000-01. It increased to 160.3 during the year 2007-08 and decreased in the years 2008-09 and 2009-10 with 146.9 and 158.69 respectively.
The Median value of the Book value per share was also negative in the year 1990-91 and in the year 1991-02. It was 27.02 in the year 1992-93 and 26.84 in the year 1993-94. Gradually it increased to highest level 138.11 during the year 2006-07, there after it decreased to 80.66 during the year 2009-10.
The Q1 value of the sample firms Book value per share was also negative in the years 1990-91 and 91-92. It was 11.92 in the year 1992-93 and 13.32 in the year 1993-94. It gradually increased to 25.25 in the year 2000-01. Immediately, it was decreased to 12.04 and 7.67 during the years 2001-02 and 2002-03. Again it reached to 27.54 high levels in the year 2008-2009 and finally it was 18.92 in the year 2009-2010.
The Q3 value of the sample firms have book value per share was 44.18 in the year 1990-1991 and it gradually increased highest level at 292.1 during the year 2007-08.
In the years 2008-2009 and 2009-2010 it was 259.5 and 283.7 respectively.
(The value in the table is in Rs.)

B) Earnings Before Interest and Tax:
The table 6.19 reveals the mean value of earnings before interest and tax in over all sample firms. It was 207 in the year 1990-1991 and it gradually increased to 2779 during the year 2009-2010, except in the year 2008-2009 with 2508.
The median value of EBIT in overall Sample CPSEs was 98 in the year 1990-1991 and gradually increased to 854 during the year 2006-2007. It was 856 in the year 2009-2010. But except for the years 2007-2008 and 2008-2009 with 815 and 522 respectively.
The Q1 value of EBIT of sample firms was 23.1 in 1990-1991 and 51 and 52.4 in 1991-1992 and 1992-1993 respectively. It decreased in the years 93-94, 94-95, 95-96
with 34.1, 37.7 and 45.2 respectively. It increased to 68.5 during the year 96-97, and it abruptly decreased to 0.44 in the year 2002-03. It again it increased to 88.7 during the year 2005-2006 and 110 in the year 2006-2007. It decreased to 61.9 and 79.8 years 2008-2009 and 2009-2010 respectively. 

Q3 value of EBIT the sample firms value 243 during the year 1990-1991 very low level and it increased for the entire period and reached to 3895 during the year 2009-2010. (See table 6.19) (The value in the table is Rs. in Cr.)

C) Earnings per Share of overall sample firms:

From the table 6.21 it is evident that the mean value of earnings per share of overall sample CPSEs was 24.03 in the year 1990-1991 and it was abnormal high in the years 91-92, 92-93, 93-94, 94-95, with 329.7, 405.7, 273.3 and 201.1 respectively. It was very low level at 11.37 in the year 95-96 and increased to 28.25 during the year 1999-2000. Again it decreased to 19.7 during the year 02-03 and it increased to 34.09 during the year 2007-2008. It was 20.49 and 23.54 in the years 08-09 and 2009-2010 respectively. 

The median value was very high at 52.25 in the year 1990-1991 and it was 6.66 in the year 1991-1992 with slight changes at was constant up to the year 2002-2003 with 6.85. It increased to 10.77 during the years 2003-2004 and 2004-2005 respectively. Again it decreased to 8.69 during the year 2009-2010. 

Q1 value of EPS of overall sample firms was 2.38 in the year 1990-1991 and gradually decreased to 0.18 and 1.08 during the years 1998-1999 and 1999-2000 respectively. It was negative in the years 2001-2002, 2002-2003, 2003-2004, 2004-2005. In the year 2005-2006 it was 2.36 and decreased to 1.67 during the year 2009-2010. 

Q3 value of the sample firm was 513 in the year 1990-1991 and 89.3 in the year 1991-1992. It decreased to 11.8 during the year 1995-1996. It increased to 29.6 during the year 2000 -2001 and also reached to 62.9 during the year 2006-2007. Finally, it was 42.5 in the year 2009-2010. (The value in the table is in Rs.)

D) Financial Leverage ratio of overall sample firms:

Table 6.2 reveals that the overall sample CPSEs financial leverage in 1990-1991 was 2 and in the year 1991-1992 it was 0.99. It increased to 3.22 during the year 1992-
1993. Further, it decreased in two years 1993-1994 and 1994-1995 to 1.8 and 1.89 but it reached very highest level during the year 1995-1996 with 6.78. In the year 1999-2000 it was 11.1. It was negative value -1.08 in the year 2001-02 and 1.33 in the year 2002-2003. Finally with slight changes it was decreased to 0.99 during the year 2009-2010.

Median value of financial leverage was 1.71 in the year 1990-1991 and 1 in the year 1991-1992. It reached to 1.79 during the year 1992-1993 but it gradually decreased to 0.86 during the year 2001-2002. Again it was increased to 1 during the year 2005-06 and it further increased during the years 2008-09 and 2009-10 with 1.06 and 1.03 respectively.

The Q1 value was 1.18 in the year 1990-1991 and 1 in the year 1991-1992. It increased to 1.35 during the year 1992-1993, and it gradually decreased to 0.7 during the year 2001-02. After that, it increased to 1 during the year 2007-08 and it was constant in the next two years 2008-09 and 09-10 with same value.

Q3 value of the firms was 2.27 in the year 1990-1991 and in the year 1991-1992 it was 1, it was reach high level at 2.61 during the year 1992-1993 and it decreased to 0.99 during the year 2001-2002. Further it was increased to 1.64 during the year 2008-2009, and in the final year 2009-2010 it was 1.19.

From the table 6.2 the data explicit that on an average 4.74 percent sample CPSEs have negative financial leverage ratio, and average 3.12 percent firms have ratio 0-0.5 ratio, On average 18.35 percent firms have 0.5-1 ratio and average 42.54 percent firms have 1-1.5 ratio for the entire study period. On an average range 12.22 percent firms have 1.5-2 ratio, 6.87 percent firms have 2-2.5 ratio, 2.69 percent firms have 2.5-3 ratio and final 9.47 percent firms have 3&above ratio respectively.

In the year 1991 and also in the years 1993, 1994, 2005, 2006 and 2007 no single firm has negative ratio. In the year 1995 3.13 percent firms have negative ratio and it was 2.78 percent firms in 2004 and 2008 have negative value. Finally in the year 2010 8.33 percent firms have negative ratio.

It was 3.23 percent firms in the year 1994 and 13.89 percent firms in the year 2002, and it was 5.56 percent firms in the year 2009 have ratio of 0-0.5 the percentage of firms having the ratio of 0.5-1 was very high in the year 1992 with 96.67 percent and it reached very low levels in the years 1994 and 1999, with 3.23 and 5.71 percent respectively. Again the percent reached high levels in the years 2002 and 2004 with
61.11 percent and 72.22 percent respectively. Finally in the year 2010, 13.89 percent firms have the 0.5-1 ratio. It was 40.90 percent firms in the year 1991 have 1-1.5 ratio and 50.00 percent in the year 2003 with slight up and downs have same ratio of 1-1.5. Again in the year 2005 it was abruptly increased the percentage of firms having 1-1.5 ratio of was increased to 72.22 percent and 69.44 percent in the year 2010. The ratio 1.5-2 had by the firms was very high in the years 1991, 1993, and 2006 with 27.27, 26.67, and 69.44 percentages respectively.

E) Gross Interest Coverage ratio of overall sample firms:
Table 6.13 reveals the gross interest coverage ratio of overall sample CPSEs, the data denote that the mean value of GICR was 5.08 in the year 1990-1991 and it increased to 179.9 and 127.1 during the years 1995-1996 and 1996-1997 respectively. It was 24.09 in the year 1997-1998 and high in the year 2000-2001 with 293.2. Again it was 8.80 in the year 2001-2002 and increased to 117.6 during the year 2005-2006. It was very high in remaining years of the study period. It was 193, 293.1, 209.5 and 191.5 in the years 2006-2007, 2007-2008, 2008-2009 and 2009-2010 correspondingly.

The median value was 2 in the year 1990-1991 and it was 1.9 in the year 2001-2002, it increased to 3.2 during the year 2002-2003 and it was very high in the years 2004-2005, 2005-2006, with 12. It decreased to 3.2 during the year 2008-2009 and 6.2 in the year 2009-2010.

Q1 value was 1.53 in the year 1990-1991 and it gradually increased to 0.01 in the year 2001-02. It was negative in the year 2000-01 with -6.06 and in the year 2002-03 with -1.44. Again it was 0.55 in the year 2003-04 and gradually increased to 2.39 during the year 2009-10.

Q3 value was 4.1 in the year 1990-91, and it gradually increased to 60.7 during the year 2009-2010 with slight up and down in the entire period.

An analysis of frequency distribution of gross interest coverage ratio of sample CPSEs from the table-6.14 shows that on an average the overall sample CPSEs have gross interest coverage ratio of 0-1 (7 percent), 1-2 (18.16 percent), 2-3 (12.56 percent), 3-4 (6.45 percent), 4-5 (4.13 percent), 5-10 (11.31 percent) and also above 10 (27.52 percent) of the study period. Further, on an average 12.87 percent sample CPSEs firms have negative gross interest coverage ratio for entire study period. (see Table-6.14)
F) Operating Leverage Ratio of Selected overall sample firms:

The table 6.7 reveals that the mean value of sample CPSEs operating leverage ratio. It was 3.2 in the year 1991-1992 and it creased to 4.88 during the year 1994-1995 and it was negative in the year 1995-1996. It was 1.78 and 5.48 in the years 1996-1997 and 97.98 respectively. It was negative in the years 1998 and 1999. It was a very high 3.87 during the year 2001-2002 decreased to 0.06 in the years 2002-2003, 2003-2004, it was - 17. It was decreased to 0.28 in the year 2008-2009 and 1.02 in the year 2009-2010.

The median value was 0.98 in the year 1991-1992 and gradually decreased to 0.2 in the year 1999-2000. It was increased to 1.29 in the year 2004-2005 and finally it decreased to 0.14 during the year 2009-2010.

Q1 value except in the years 1997-1998 and 2006-2007 was 0.36 and 0.06 positive ratio remaining all years for the entire study period have negative ratio.


An analysis of frequency distribution of operating leverage ratio of sample CPSEs from the table-6.8 shows that on an average, the overall sample CPSEs have operating leverage ratio of 0-1 (19.05 percent), 1-2 (19.66 percent), 2-3 (8.95 percent), 3-4 (4.52 percent), 4-5 (2.91 percent), 5-10 (6.71 percent) and also above 10 (7.72 percent) of the study period. Further, on an average 30.48 percent sample CPSEs firms have negative operating leverage ratio for the entire study period. (see Table-6.8)

G) Sales of overall sample firms:

From the table 6.20 the data reveals that the mean value of sales was 2572 in the year 1990-1991 and it gradually increased to 26393 during the year 2008-2009. But finally it was 25214 in the year 2009-2010.

The median value was 903 in the year 1990-1991 and it gradually increased to 2012 during the year 2000-2001. It decreased to 1948 during the year 2001-02, again in the year 2002-2003 it was 2378. It gradually increased to 4681 during the year 2009-2010.
Q1 value was 246 in the year 1990-1991 and it gradually increased to 745 during the year 2000-2001. But except in the year 1999-2000 with 482. It was to 546 during the year 2001-2002 and gradually increased to 1440 very high value during the year 2009-2010.  

Q3 value was 2836 in the year 1990-1991 and gradually increased to 34614 during the year 2009-2010. (The value in the table is Rs. in Cr.)

II) Capital Structure Determinants in Manufacturing Industry

A) Book Value per Share of selected firms in Manufacturing Industry:

From the table 6.22 the data reveals that the mean value of book value per share of selected CPSEs in manufacturing industry was negative in the years 1990-1991 and 1991-1992 and it was 15.37 in the year 1992-1993 and 30.18 in the year 1993-1994 and 5.53 in the year 1994-1995. It was 12.73 in the year 1995-1996 and in the year 1996-1997 it was 9.11, it was 76.45 in the year 1997-1998 and gradually increased to 139.21 during the period 2009-2010.

The median value was negative in the years 1990-1991 and 1991-1992. In the year 1992-1993 it was 27.02 and in the year 1993-1994 40.05, it was 41.34 in the year 1994-1995 gradually decreased to 23.71 during the year 1996-1997. It was 30.06 in the year 1999-2000 and decreased to 18.8 during the year 2002-2003. It again gradually increased to 52.67 during the year 2008-2009 and finally in the year 2009-2010 it was 50.62.

Q1 value was negative for the years 1990-1991 and 1991-1992 and it was 11.5 and 13.3 in the years 1992-1993 and 1993-1994. In the year 1994-1995 it was 10 and decreased to 5.26 in the year 1996-1997. It was increased to 16.2 during the year 1998-1999. But It was gradually decreased to 1.33 in the year 2003-2004 and it was 5.21, 5.28 and 5.88 in the years 2004-2005, 05-06, and 06-07 respectively. Finally, it was 2.86 in the year 2009-2010.

Q3 value was 44.2 in the year 1990-1991 gradually it increased and reached to 294 during the year 2009-2010. It showed increase trend for the entire study period except in few years. (The value in the table is in Rs.)
B) Earnings before Interest and Tax of sample firms in manufacturing industry:
From the table 6.19 the mean value of EBIT in manufacturing industry was 210 in the year 1990-1991 it and gradually increased to 2213 during the year 2009-2010. but except in two years 2005-2006 and 2008-2009 with 1122 and 1661 respectively. The median value was 97 in the year 1990-1991 and it was 114 and 148 in the years 1991-1992 and 1992-1993 respectively. It gradually increased to 141 in the year 1996-1997 and 158 in the year 1998-1999. In the year 1997-1998 it was 26.6 and in the year 2002-03 it was 43.9 and it gradually increased to 321 in the year 2009-2010, except in the year 2008-2009 it was 176.
The Q3 value was 251.5 in the year 1990-91 and gradually increased to 846.4 during the year 1998-99. It was 442.7 in the year 2001-02 gradually increased to value 3134 in the year 2009-10. (The value in the table is Rs. in Cr.)

C) Earnings per Share of selected firms:
Table 6.21 shows that the mean value was 807.7 in the year 1990-1991 and abnormally decreased to 0.40 during the year 1994-1995. It was negative value in the year 1995-1996. It was 0.11 during the period 1996-1997 and gradually increased to 24.13 during the year 2009-2010, except in the year 2008-2009 with 16.67.
The median value was 45.7 in the year 1990-1991, and decreased to 1.96 during the year 1996-1997. It increased to 17.4 in the year 2004-2005 again decreased to 3.83 during the year 2008-2009. Finally it reached to 11.3 for the period 2009-2010.
The Q1 value of EPS in manufacturing industry it was 2.38 in the year 1990-1991 and 2.65 in the year 1991-92. It and decreased to 0.93 in the year 1994-95 and It was 0.31 in the year 1997-98. It was 0.58 in the year 2004-05 and it was negative of the remaining period study.
The Q3 value was as abnormal in the year 1990-1991 with 967, it was 58.4 and 12.2 in the years 1991-92 and 92-93 respectively. It was 12.1 in the year 2000-01 and
increased to 64.1 during the year 2006-07. It in the years 2007-08, 08-09 and 09-10 it was 53.8, 26.4 and 42.6 respectively. (The value in the table is in Rs.)

**D) Financial Leverage of sample firms in manufacturing industry:**

Table 6.1 reveals that the mean value of sample CPSEs in manufacturing industry was 2.11 in the year 1990-1991 and it reached highest level 10.6 and 19.8 in the years 1995-1996 and 1999-2000 respectively. It was negative value -2.7 in the year 2001-2002, and it was 0.97 in the year 2009-2010.

Median value was 1.21 in the year 1990-1991 and it reached to 2.06 during the year 1993-1994. It and gradually decreased to 1.04 during the year 2009-2010 with slight changes.

Q1 value was 1.21 in the year 1990-1991 and it was reached to 0.09 during the year 1998-1999. Again it increased to 1.02 during the year 2004-2005 and it was constantly contained to remaining years and reached to 1 during the period 2009-2010.

Q3 value was 2.39 in the year 1990-1991 and in increased to highest level at 7.28 in the year 1997-1998. It decreased to 1.17 during the year 2009-2010.

The table 6.3 gives the evident for the financial leverage ratio of sample firms in manufacturing industry. On an average 7.65 percent sample firms in manufacturing industries was negative, 3.99 percent firms have 0-0.5 ratio, on an average 17.91 percent firms have the 0.5-1 ratio for the entire study period, 41.07 percent firms have 1-1.5 ratio

An analysis of frequency distribution of Financial Leverage of sample CPSEs from the table-6.3 shows that on an average the sample CPSEs in Manufacturing industry have Financial Leverage of 0-5 (3.99 percent), 0.5-1 (17.91 percent), 1-1.5 (41.07 percent), 1.5-2 (6.18 percent), 2-2.5 (5.21 percent), 2.5-3 (3.33 percent) and also above 3(14.67 percent) of the study period. Further, on an average 7.65 percent sample CPSEs firms have negative Financial Leverage ratio for the entire study period. (see Table-6.3)

**E) Gross Interest Coverage Ratio of sample firms in manufacturing industry:**

The mean value of ratio was 3.02 in the year 1990-1991 and it was 3.27 in the year 1999-2000. It decreased to 1.66 during the year 2000-2001 and it increased to 219 in
2009-2010. It reached very high level in the years 2006-2007 and 2007-2008 with 206 and 438 respectively.

Median value of ratio was 2 in the year 1991 and it gradually decreased to 1.1 during the year 2000-2001. The median value again increased to 1.5 in the year 2002-2003 and reached to 5.9 during the year 2009-2010.

Q1 value was 1.5 in the year 1990-91 and gradually decreased to 0.32 during the year 1998-1999, it was -0.05 in the year 1990-2000 and -1.65 in the year 2003-2004. It was 0.71 in the year 2004-2005 and it was 1.68 in the year 2009-2010.

An analysis of frequency distribution of gross interest coverage ratio of sample CPSEs from the table-6.15 shows that on an average the sample CPSEs in manufacturing industry have gross interest coverage ratio of 0-1 (10.37 percent), 1-2 (21.09 percent), 2-3(7.65 percent), 3-4 (6.10 percent), 4-5 (3.64 percent), 5-10 (12.69 percent) and also above 10(20.25 percent) of the study period. Further, on an average 18.22 percent sample CPSEs firms have negative gross interest coverage ratio for the entire study period. (see Table-6.15)

F) Operating Leverage of sample firms in manufacturing industry:

From table 6.7 data elucidate that operating leverage of sample firms. The mean value of operating leverage ratio was 4.81 in the year 1991-1992 and In the year 1992-1993 it was 4.68. In the year 1993-1994 it was 5.62 in the year 1994-1995, it was negative mean value in the years 95-96, 98-99, 99-00, 02-03, 03-04, 05-06, 06-07 and 09-10. It was high value 7.23 during the period 97-98; it was 3.42 and 4.43 in the years 2001-2002 and 2004-2005 respectively.

The mean value was 0.98 in the year 1991-1992 and in the year 1996-1997 it was 1.72 and increased to 2.03 during the year 2001-2002, and in the year 1999-2000 it was negative value. In the year 2002-2003 it was 1.68 and decreasing to 0.37 during the year 2008-2009. In the year 2009-2010 it was -0.28.
Q1 in the years 1991-1992, 1993-1994, 1995-1996 and 1996-1997 from 2006-2007 to 2008-2009 was positive and for the remaining years it was negative. Q3 value was 2.07 in the year 1991-1992, and reached high value 9.73 and 9.11 in the years 1996-1997 and 1997-1998 respectively. But in the year 1998-1999 it was 1.8 with high changes and in the year 2002-2003 it was 6.52 and finally it was 1.7 in the year 2009-2010. An analysis of frequency distribution of operating leverage of sample CPSEs from the table-6.9 shows that on an average, the sample CPSEs in Manufacturing industry have operating leverage ratio of 0-1 (115.90 percent), 1-2 (17.04 percent), 2-3(7.82 percent), 3-4 (4.74 percent), 4-5 (2.74 percent), 5-10 (7.91 percent) and also above 10 (10.12 percent) of the study period. Further, on an average 33.73 percent sample CPSEs firms have negative operating leverage ratio for the entire study period. (see Table-6.9).

G) Sales of sample firms in manufacturing industry:

The mean value of sales of sample firms in manufacturing industry was 3000 in the year 1990-1991 and gradually increased to 37215 during the year 2008-2009. But it was decreased to 33546 during the year 2009-2010. The median value was 780 in the year 1990-1991 and gradually increased to 4875 during the year 2009-2010. Q1 value was 254 in the year 1990-1991 and 414 in the year 1992-1993, 218 in the year 1993-1994 and it increased to 429 during the year 1996-1997. Again it was decreased to 176 during the year 2003-2004 and it was again increased from 255 in the year 2004-2005 to 337 in the year 2009-2010. Q3 value was 4290 in the year 1990-1991 and increased to 39139 during the year 2008-2009. Further, decreased to 34981 during the year 2009-2010.

Capital Structure Determinants in Service Industry

A) Book Value per Share of selected firms in service industry:

From the table 6.22 the data revealed that the mean value of book value per share in service industry was 28.8 in the year 1993-1994, and it was gradually increased to
237.7 during the period 2006-2007. It was 232.3, 210.01 and 213.2 it the years 2007-2008, 2008-2009 and 2009-2010 respectively.

The median value of book value per share was 28.8 in the year 1992-1994 and it was 40.83 in the year 1995-1996. It gradually increased to 208.1 during the year 2008-2009 and finally it was 174.2 during the period 2009-2010.

Q1 value was 26.84 in the year 1993-1994 and gradually increased to 180.3 in the year 2006-2007. It was 112.9, 107.9 and 117.9 in the years 2007-08, 08-09 and 09-10 respectively.

Q3 value was 30.76 in the years 1993 and 1994 and gradually increased to 387.6 during the year 2006-2007. It was 383.3, 278.3 and 314.6 in the years 2007-2008, 2008-2009, and 2009-2010 respectively. (see Table 6.7) (Value in the table is in Rs.)

B) Earnings before Interest and Tax of sample firms in service industry:

From table 6.19 it is evident that the mean value of EBIT in service industry was 115 in the year 1990-1991. And it was gradually increased to 484 during the year 1998-1999. It decreased to 340 during the year 1999-2000 and again it was 432 during the year 2000-2001. It was 402, 315, 425 and 531 in the years 2001-2002, 2002-2003, 2003-2004, and 2004-2005 respectively. In the year 2005-2006 it was 414 and in 2006-2007 and 2007-2008 it was 503, it was 536 and 479 in the years 2008-2009 and 2009-2010.

The median value was 109 in the year 1990-1991, it decreased to 61.9 in the year 1993-1994 it was 728 in the year 1994-1995. It gradually increased to high value 548 in the year 2009-2010, except decline in the years 1996-1997, 1997-1998, and 2001-2002, with 95.4, 96.2, and 120 respectively.


Q3 value was 186 in 1990-1991 it was highest value in the years 2006-2007, 2007-2008, 2008-2009, and 2009-2010 with 980, 916, 990 and 941 respectively. But it was
evident abnormal decline in the year 2004-2005 with 14.67. (Value in the table is Rs. in Cr.)

C) Earnings per share of sample firms in service industry:
The mean value was 34.4 in the year 1990-1991 for EPS in service industry, and it was very high in the years 1991-1992, 1992-1993 and 1993-1994, with 232, 243 and 366 respectively. It was decreased to 12 during the year 1995-96 and it was 4.43 continues to 16.6 in the year 2001-2002. It increased to 22.4 during the year 2002-2003 and increased to 64.1 during the year 2006-2007. It decreased to 26.4 and 42.6 in the years 2008-09 and 2009-10 respectively.
The median value was 251.9 in the year 1990-1991 and it decreased to 6.18 in the year 1993-1994. It increased to 19.38 and 22.36 in the years 2007-2008 and 2009-2010 it was respectively.
Q1 value was negative in the 1990-1991, and it was 4.31 in the year 1991-1992. It was 4.43 in 1990-2000 and there again it deceased to 1.11 in the year 2002-2003. It was increased to 10.02 in the year 2004-2005. During the years 2006-2007 and 2007-2008 it was 13.19 and 13.98 receptively. It was very low level in the year 2009-2010 with 1.61.
Q3 value was 808 in the year 1990-1991 but abnormally decreased to 43 in the year 1991-1992. It again decreased to 11.5 in the year 1995-1996 and it increased to 64.5 in 2005-2006. Again it decreased to 56.2 in the year 2009-2010. But in the years 2007-08 and 08-09 was 50.4 and 52.7. (Value in the table is in Rs.) (see Table 6.21).
D) Financial Leverage of sample firms in service industry:

The table 6.1 revealed that the mean value was 1.45 in the year 1990-1991 and it was 0.95 in the year 1991-1992, and it increased to 2.01 in the year 1998-1999 and in the year 1999-2000 it was 0.39, again it increased to 2.66 during the year 2002-03 and again decreased to 1.77 in 2003-04 and it was 0.9 in the year 2009-2010.

The median value was 1.29 in the year 1990-1991 and it increased to 1.58 in the year 1998-1999. It decreased to 0.81 during the year 2001-2002 and mean value was constant from the year 2002 to the year 2010 at 1 to 1.12 with slight changes.

Q1 value was 1.04 in the year 1990-1991 and in the year 2009-2010 it was 1, except negative value in the year 1999-2000. It was 0.77 and 0.54 in the years 2000-2001 and 2001-2002 respectively.

Q3 values was 2 in the year 1990-1991 and decreased to 1.75 in the year 1996-1997. It was 2.02 and 2.65 in the years 1997-1998 and 1998-1999 respectively. It decreased to 1.27 during the year 1999-2000 and gradually decreased to 1.6 during the year 2009-2010.

An analysis of frequency distribution of financial leverage of sample CPSEs from the table-6.4 shows that on an average the sample CPSEs in Service industry have financial leverage ratio of 0-0.5 (1.88 percent), 0.5-1 (22.50 percent), 1-1.5 (51.61 percent), 1.5-2 (10.80 percent), 2-2.5 (4.46 percent), 2.5-3 (1.25 percent) and also above 3 (5.00 percent) of the study period. Further, on an average 2.50 percent sample CPSEs firms have negative financial leverage ratio for the entire study period. (see Table-6.4)

E) Gross Interest Coverage Ratio of sample firms in Service Industry:

From the table 6.13 the GICR of sample in service industry mean value was 14 in the year 1990-1991 and 9.5 it was 28 in the years 1991-1992 in 1992-1993. It was 90 in the year 1994-1995 and it was 654 in the year 1995-1996. It was 114. In the year 1997-1998. The mean value was 106 in the year 1998-1999. In the year 2005-2006 it was 401, it was very high in the year 2008-2009 with 928, finally it was -81 in the year 2009-2010.
Median value was 2.75 in the year 1990-1991 and it increased to 26.2 in 2003-2004, it was very high in 2008-2009 with 64.6. During the year 2009-2010 it was 5.4.

Q1 value was 1.51 in the year 1990-1991 and it increased to 2.73 during the year 1993-94 it decreased to 1.07 during the year 2000-2001. It was negative in the years 2001-2002 and 2002-2003, with -2.31 and -16.3. It was 1.41 percent in the year 2003-2004 and it was 1.69 in the year 2009-2010.

Q3 value was 21.7 in the year 1990-1991 it was 65.2, 123, 229 and 186 in the years 1995-1996, 1996-1997, 997-1998 and 1998-1999 respectively. It was 951,296 and 166 in the years 2003-2004, 2004-2005 and 2005-2006 respectively. In the years 2006-2007, 07-08, 08-09, and 09-10 it was 191, 127, 2296 and 775 respectively.

An analysis of frequency distribution of gross interest coverage ratio sample CPSEs from the table-6.16 shows that on an average the sample CPSEs in Service Industry have gross interest coverage ratio of 0-1 (3.57 percent), 1-2 (12.08 percent), 2-3 (16.93 percent), 3-4 (6.61 percent), 4-5 (5.57 percent), 5-10 (8.48 percent) and also above 10 (41.10 percent) of the study period. Further, on an average 5.65 percent sample CPSEs firms have negative gross interest coverage ratio for the entire study period. (see Table-6.16)

F) Operating Leverage of Sample firms in service industry:

From the table 6.7 data revealed that the mean value of operating leverage of sample CPSEs in service industry. It was 2.37 in the year 1991-1992 and it was 1.43 in the year 1997-1998. In the year 1998-1999 it was 20.17 and it was negative value in the year 1999-2000 it was 14.72 during the year 2000-2001 and it was 0.13 in the year 2001-2002. It was 0.88 in the year 2009-2010.

Median value was 2 in the year 1991-1992 and 0.76 in the year 1999-2000. It was very low 0.46 at during the year 2003-2004 and it was 0.88 in the year 2009-2010. But it negative value -0.56 during the period 2005-06.

Q1 value 0.42 in the year 1991-1992 and 1.2 in the years 1993-1994 and 1996-1997. It was 0.76 in the year 1999-2000 and it was 0.81 and 0.21 in the years 2000-2001 and 2001-2002 respectively. It was -2.45 in the year 2002-2003 and -0.7 in the year 2009-2010. It was -2.45 and -0.7 in 2002-2003 and 2009-2010 respectively.
Q3 value it was 4.62 in the year 1991-1992 and decreased to 2.14 during the year 1994-1995. It increased to 7.32 during the year 2000-2001, but again it decreased to 2.88 during the year 2009-2010.

An analysis of frequency distribution of operating leverage ratio sample CPSEs from the table-6.10 shows that on an average the sample CPSEs in Service industry have operating leverage ratio of 0-1 (25.60 percent), 1-2 (18.98 percent), 2-3 (10.03 percent), 3-4 (5.23 percent), 4-5 (4.39 percent), 5-10 (8.33 percent) and also above 10 (3.51 percent) of the study period. Further, on an average 23.93 percent sample CPSEs firms have negative operating leverage ratio for the entire study period. (see Table-6.10)

G) Sales of sample firms in Service Industry:
From the table 6.20 the data reveals that the mean value was 1600 in the year 90-91 and it decreased to 1120 during the year 93-94. Again it increased to 10082 during the year 2009-10.

The median value was 1208 in the year 1990-1991 and decreased to 278 in the year 96-97. It was 456 in 1997-1998. It was gradually increased to 3792 during the year 2008-09. But it was 3562 in the year 2009-10.

The Q1 value was 73.5 in the year 1990-91 and it gradually increased to 711 during the year 2003-2004. It decreased to 621 in the year 2004-2005. It decreased to 579 and 572 in the years 05-06 and 06-07. In the years 07-08, 08-09 and 09-10 it was 723, 976 and 1001 respectively.

Q3 value was 903 in the year 1990-91 and it was gradually increased to 38429 during the year 2008-09. Finally, in the year 2009-10 it was 36050. (Value in the table is Rs. in Cr.)

Capital Structure Determinants in Mining Industry

A) Book value per share of sample firms in mining industry:
Book value per share of sample firms in mining industry is shown in table 6.22. According to the data the mean value was 12.3 in the year 1992-1993 and it was 13.3 and 13.5 in the years 1993-1994 and 1994-1995. It was 51.5 in the year 1995-1996
gradually increased to 278 during the year 2007-2008. It was 140 and 238 in the years 2008-09 and 2009-10 respectively.

The median value was 12.29 in the year 1992-1993 and it gradually increased to 234 in the year 2007-2008. It was 90.49 and 161.3 in the years 2008-2009 and 2009-2010 respectively.

The Q1 value was 14.03 in the year 1995-1996 and decreased to 6.19 during the year 1998-1999. In the years 1999-2000, 2000-2001 and 2001-2002 it was 14.08, 13.41 and 13.29 respectively. In the years 2002-2003 and 2003-2004 it was 4.9 and it was 17.78 in the year 2005-2006 it increased to 46.41 during the year 2007-2008 and decreased to 24.07 during the year 2009-2010.

The Q3 value was 123 in the year 1995-1996 and gradually it was increased to 553 in the year 2007-2008. Again it decreased to 314 and 490.3 in the years 2008-2009 and 2009-2010 respectively. (Value in the table is in Rs.)

B) EBIT of sample firms in Mining industry:
The table 6.19 revealed that the mean value of EBIT of sample firms in Mining industry was 98.99 in the year 1990-91 and gradually increased to 7359 in the year 2008-09. In the last year of the study period it was 7120.

The median value from the table 6.19 was 84.1 in the year 1990-91 and it gradually increased to 3895 during the year 2009-10, except in two years 1994-95 and 2000-01 with 179 and 629 respectively.

The Q1 value negative in the year 1990-91 and it was 92.2 in 1991-92. It increased to 141 during the period 1996-97, except in the year 1994-95 with 36.3. In year 1997-98 it was 63.1 and gradually increased to 1439 in the year 2007-08. In the years 2008-09 and 2009-10 it was 1013 and 736 respectively.

The Q3 value was 221.1 in the year 1990-91 and gradually increased to 15688 during the year 2008-09. It was 15117 in the year 2009-10. It was low 7592 in the year 2003-04. (Value in the table is Rs. in Cr.)

C) Earnings per share of sample firms in Mining Industry
From the table 6.21 the data revealed that the mean value of EPS in mining industry was 27.74, 466, 336 and 894 in the years 1990-91, 91-92, 92-93 and 93-94 respectively. It was 811.9 in the year 1994-1995 and it was suddenly decreased to
12.18 during the year 95-96. In the years 96-97, 97-98, 00-01 and 01-02 it was 9.62, 8.48, 8.61 and 13.07 respectively. Further it increased gradually to 86.89 during the year 2007-2008 and in the years 2008-2009 and 2009-2010 it was 40.84 and 41.93 respectively.

The median value was 27.74 in the year 1990-1991 and 371.8 in the year 1991-1992. Suddenly it was fell down to 3.6 during the year 1992-1993 and 3.25 in the year 1993-1994. It was 5.46 in the year 1994-1995 and it increased to 78.97 during the year 2005-2006. It was 72.03 in the year 2006-2007 and decreased to 12.64 in the year 2005-2006. It was 20.6 in the year 2006-2007 and decreased to 12.42 during the year 2009-10.

Q1 value was negative in the years 1990-91, 91-92, 92-93, 93-94, 97-98 and 98-99 and it was 0.61 in 1993-94 It was 1.75 in 1999-00 and increased to 12.64 and 20.6 in the year 2005-06 and 2006-07 respectively. Finally it decreased to 5.46 and 5.18 in the years 2008-2009 and 2009-2010 respectively.

Q3 value was 62.04 in 1990-1991 it was very high in the years 1991-1992, 1992-1993, 1993-1994, 1994-1995 with 1029, 1005, 2683 and 2026. It was 23.8 in the year 1995-1996 and it increased to 164.8 in the year 2007-2008 respectively. In the years 2008-2009 and 2009-2010 it was 86.31 and 93.44 respectively. (Value in the table is in Rs.)

D) Financial Leverage of sample firms in Mining Industry:

From table 6.1 the data reveals that the mean value of sample CPSEs in mining industry was 3.07 in the year 1990-1991 and 1 in the year 1991-1992. It was 1.58 in the year 1992-1993 and gradually it was decreased to 0.9 during the year 2003-2004. It was 1.18 in the year 2004-2005 and it decreased to 1.02 during the year 2009-2010 except in the year 2008-2009 with 1.26.

The Median value was 3.07 in the year 1990-1991 and it was 1 in the year 1992. It gradually decreased to 0.98 in the year 2001-2002 and slight increased to 1 in the year 2009-2010.

Q1 value was 1 in the year 1991-1992 and 1.05 in the year 1992-1993. It gradually decreased to 0.79 in the year 2002-2003. Again gradually increase to 1 during the year 2009-2010.
Q3 value was 1 in the year 1991-92 and 1.89 in the year 1992-93. It gradually decreased to 0.79 during the year 2002-03 and then it reached to 1.11 during the year 2002-03. Again it decreased to 1.04 during the year 2009-10 except in the years 2008-09 and 2004-05 with 1.64 and 1.43 respectively.

An analysis of frequency distribution of financial leverage ratio sample CPSEs from the table-6.5 shows that on an average the sample CPSEs in Mining industry have financial leverage ratio of 0-0.5 (1.00 percent), 0.5-1 (27.17 percent), 1-1.5 (59.83 percent), 1.5-2 (6.00 percent), 2-2.5 (1.00 percent), and also above 3 (5.00 percent) of the study period. Further.(see Table-6.5)

**E) Gross Interest Coverage ratio of sample firms in mining industry:**

From the table 6.13 the data revealed that the mean value was 1.20 in the year 1990-1991 and it was 14.92 in the year 1994-1995. It was 335.9 and 789.4 in 1995-1996 and 1996-1997 years respectively. It was very high in the year 2000-2001 with 2130, and it was 162 in the year 2004-05. It increased to 711.8 during the year 2009-10.

The median value was 1.54 in the year 1990-1991 and it was increased to 62.4 during the period 2004-05. It was 135 in the year 2005-06 and again it was reached high level at 534 in 2009-10.

Q1 value was negative in the year 1990-91 and it was increased to 3.22 during the year 1996-1997. It was negative value in the years 1997-1998, 1998-1999, 1999-2000, and 2001-2002. It was 46.3 in the year 2006-2007 and 19 in the year 2007-2008. In the year 2008-2009 it was 4.36 and in the year 2009-2010 it was 49.8.

Q3 value was 2.92 in the year 1990-1991 and 22.3 in the year 1991-1992. It was increased to 832 during the year 1995-1996 and in the year 1996-1997 it was 1964. Again it was high in the year 2000-2001 with 5308 and it was 58.4 in 2001-2002. It was 255 in 2002-2003. It was 1552 in 2009-2010.

An analysis of frequency distribution of gross interest coverage ratio sample CPSEs from the table-6.17 shows that on an average the sample CPSEs in Mining industry have gross interest coverage ratio of 0-1 (1.25 percent), 1-2 (5.67 percent), 2-3 (12.17 percent), 3-4 (5.00 percent), 4-5 (1.00 percent), 5-10 (15.75 percent) and also above 10 (48.25 percent) of the study period. Further, on an average 10.92 percent sample
CPSEs firms have negative gross interest coverage ratio for the entire study period.
(see Table-6.17)

**F) Operating Leverage Ratio of sample firms in mining industry:**

From the table 6.7 evident that the mean value of operating leverage ratio sample in mining industry was -4.16 in the year 1991-1992 and it was -9.76 in the year 1992-1993. It was -9.76 in the year 1992-1993 and it was -0.92 in the year 1993-1994. It was 11.3 in the year 1994-1995 and it decreased to 0.48 during the year 2002-2003. Except in the year 1996-1997 with -0.03 and -0.53 it reached very low level in the year 2004-2005 with -54.2 and it was 2.38 in 2009-2010.


Q1 value was 1.53 in the year 1997-98 and it was 0.988 and 1.16 in the years 2005-2006 and 2006-07 respectively. For the reaming years It was negative for the entire study period.

Q3 value was -0.61 in the year 1991-1992 and increased to 28 in the year 1993-1994 gradually it decrease to 1.77 during the year 2004-2005 and again it incased to 8.12 in the year 2009-2010.

An analysis of frequency distribution of operating leverage ratio sample CPSEs from the table-6.11shows that on an average the sample CPSEs in Mining industry have operating leverage ratio of 0-1 (21.32 percent), 1-2 (14.74 percent), 2-3 (13.68 percent), 3-4 (3.16 percent), 4-5 (2.11 percent), 5-10 (4.21 percent) and also above 10 (5.53 percent) of the study period. Further, on an average35.26 percent sample CPSEs firms have negative operating leverage ratio for the entire study period. (see Table-6.11)

**G) Sales of Sample firms in Mining Industry:**

From the table 6.20 the data revealed that the mean value of sales of sample firms in mining industry was 471 and it was gradually increased to 18281 during the year 2008-2009. Finally it was 17040 in the year 2009-2010.
The median value was 432 in the year 1990-1991 and gradually increased to 7564 in the year 2008-2009. In the last year it was 6239 for the study period.

The Q1 value was 78.1 in the year 1990-1991 it gradually increased to 3492 during the year 2008-2009. It was 3430 in the year 2009-2010.

The Q3 value was 903 in the year 1990-1991 and it gradually increased to 38429 in during the year 2008-2009 in the last year of the study period it was 36050. (Value in the table is Rs. in Cr.)

CAPITAL STRUCTURE DETERMINANTS IN POWER INDUSTRY

A) Book Value per Share of sample firms in power industry:
From The table 6.22 the data Revealed that the mean value of sample firms in power industry of book value per share 6.7 was 17.4 in the year 1995-1996 and it gradually increased to 56.1 during the year 2006-2007. It was 50.7, 54.8, and 49.1 in the years 2002-2008, 2008-2009, and 2009-2010 respectively.
The median value was 17.4 in the year 1995-1996 and gradually increased to 56.1 in the year 2006-2007 and further, it increased to 69.6 during the year 2009-2010. (Value in the table is in Rs.)

B) Earnings before Interest and Tax of selected firms in Power Industry:
From the table 6.19 the mean value was 1027 in the year 1990-1991. In the year 1991-1992 it was 684.9 and in the year 1992-1993 it was 661. It was 696.5 during the year 1993-1994 and it gradually increased to 5926 during the year 2009-2010.
The median value was 1027 in the year 1990-1991 and was 307 in the year 1992-1993. It gradually increased to 3959 during the year 2009-2010.
Q1 value was 1.16 in the year 1991-1992 it was 193.6 in the year 1992-1993. It gradually increased to 2220 during the year 2009-2010.
Q3 value was 1747 in the year 1991-1992 and it was gradually increased to 11599 during the year 2009-2010. (Value in the table is Rs. in Cr.)

C) Earnings per share in Power Industry:
The mean value of EPS of sample firms in power industry was 110 (see the table 6.21) in the year 1990-91, and it was 23.9 in the year 1991-92. It was 868 in the year
1992-93 and decreased to 112 during the year 1996-97. Again it was increased to 187 in the year 1999-00. And it decreased to 105 during the year 2005-06. In the years 2006-07, 07-08, 08-09 and 09-2010 it was very low with 3.74, 5.26 and 6.04 and 6.15 respectively.

The median value was 110.3 in the year 1990-91 and 13.18 in the year 1991-92. It was 68.13 in the year 1992-93 and gradually increased to 172.7 during the period 2000-01. From 40.94 in the year 2002-03 it decreased to very low level 5.18, 5.58, 6.62 and 6.13 in the years 2006-07, 07-08, 08-09, and 2009-10 respectively.

Q1 value was negative in the year 1991-92 and it was increased to 9.35, 5.03 in the year 1992-93, 1994-95 respectively. It was 1.63 in the year 1996-07 and was increased to 25.2 during the year 2000-01 it decreased to 3.25 during the year 2002-03 and again it increased to 6.21 in the year 2004-05. It decreased to 0.86 during the year 2006-07. It was 1.62, 1.77 and 2.49 in the years 2007-08, 08-09 and 2009-10 respectively.

Q3 value was 84.9 in the year 1991-92 and it was very high in the years 1992-93, 93-94 and 95-96 with 2529, 2015 and 2225 respectively. It was 381 in the year 1999-00 and gradually reduced to 269 during the year 2005-06 but it was very low in the years 2006-07, 2007-08, 2008-09 and 2009-10 with 8, 8.57, 9.73 and 9.81 respectively.

(Value in the table is in Rs.)

D) Financial Leverage of sample CPSEs in Power Industry:

The mean value of sample firms in power industry was 1.47 in the year 1990-1991. From the table 6.1 the data revealed that it was 0.45 in the year 1991-1992 and it was very high financial leverage ratio 2.37 in the year 1992-1993. It gradually decreased to 1.5 during the year 2009-2010 except in the years 2001-2002 and 2003-2004 it was 1.11 and 1.16 respectively.

The median value was 1.47 in the year 1990-1991 and 1 in the year 1991-1992. It was 2.16 in the year 1993-1994 and it decreased to 0.79 during the year 2001-2002 and it was 1.44 in the year 2002-2003 and gradually decreased to 1.29 in 2009-2010 except in 0.9 in the year 2003-2004.

The Q1 value was in -0.6 in the year 1991-1992 and in 1.94 in the year 1992-1993 and gradually decreased to 0.84 during the year 2001-2002 again it increased to 1.2 during the period 2009-2010.
The Q3 value was 1 in the year 1991-1992 and 3.2 in the year 1992-1993 and it gradually decreased to 1.93 during the year 2001-2002. It was 2.24 in the year 2002-2003, again it gradually decreased to 2.03 during the year 2009-2010.

An analysis of frequency distribution of financial leverage ratio sample CPSEs from the table-6.6 shows that on an average the sample CPSEs in power industry have financial leverage ratio of 0-0.5 (15.83 percent), 0.5-1(31.67 percent), 1-1.5 (17.50 percent), 1.5-2 (29.17 percent), 2-2.5 (12.25 percent), 2.5-3 (1.67 percent) of the study period. Further, on an average 1.25 percent sample CPSEs firms have negative financial leverage ratio for the entire study period. (see Table-6.6)

E) Gross Interest Coverage ratio of sample firms in power industry:
The table 6.13 revealed that the mean value of GICR of sample firms in power industry was 2.83 in the year 1990-1991 and it was 5.4 in the year 2001-2002. Again it gradually increased to 6.73 during the year 2000-2001. It was 5.4 in the year 2001-2002 and again it increased to 7.33 in the year 2007-2008. Finally it was 4.19 in the year 2009-2010.
The median value was 2.83 in the year 1990-1991 and 2.07 in the year 1995-1996. Gradually increased to 5.31 in the year 2005-2006 and again it decreased to 2.79 during the year 2008-2009. It was 3.91 in the year last year of the study period.
Q1 value was 0.4 in the year 1991-1992, and it was gradually increased to 2.6 during the year 2005-2006. It was 2.4 in the years 2006-2007 and 2009-2010.
Q3 value was 2.4 in the year 1991-1992 it was increased to 10 during the year 1998-1999 and again it was increased to 20 during the period 2004-2005, them it was gradually decreased to 6.2 during the year 2009-2010.

An analysis of frequency distribution of gross interest coverage ratio sample CPSEs from the table-6.18 shows that on an average the sample CPSEs in Power industry have gross interest coverage ratio of 0-1 (1.67 percent), 1-2 (30.42 percent), 2-3 (27.92 percent), 3-4 (11.25 percent), 4-5 (6.25 percent), 5-10 (10.00 percent) and also above 10 (12.50 percent) of the study period. Further, for the entire study period. (see Table-6.18)

F) Operating Leverage of sample firms in Power Industry:
The table 6.7 revealed that the operating leverage of sample firms in power industry the mean value was 1.13 in the year 1991-1992 and -0.1 in the year 1992-1993. It
decreased to 0.33 during the year 1995-1996 and increased to 3.45 in the year 1997-1998. Again it decrease to -28 in the year 1998-1999 and in the years 2001-2002, 2002-2003 and 2007-2008, the value was negative. But in the year 2008-2009 it was 0.89 and in the year 2009-2010 it was 1.29.

The median value was 1.13 in the year 1991-1992 and it increased to 2.42 during the period 1997-1998 it decreased to 0.4 during the year 2003-2004 and 2.37 in the year 2004-2005 and decreased to 0.75 during the year 2009-2010. It was negative value in the years 1992-1993, 1998-1999 and 2001-2002.


Q3 value was -0.1 in the year 1992-1993 and 0.74 in the year 1993-1994. It increased to 6.52 in the year 1997-1998 except in -1.54 in the year 1996-1997. It decreased to 0.7 in the year 2001-2002 and it increased to 2.43 during the year 2009-2010.

An analysis of frequency distribution of operating leverage ratio sample CPSEs from the table-6.12 shows that on an average the sample CPSEs in power industry have operating leverage ratio of 0-1 (32.89 percent), 1-2 (25.88 percent), 2-3 (8.33 percent), 3-4 (4.39 percent), 5-10 (4.39 percent) of the study period. Further, on an average 24.12 percent sample CPSEs firms have negative operating leverage ratio for the entire study period. (see Table-6.12)

**G) Sales of sample CPSEs in power industry:**

From the table 6.20 the data make clear that 4785 in the year 1990-1991 and it decreased to 2525 during the year 1992-1993. It increased to 18088 during the year 2009-2010.

The median value was 4785 in the year 1990-1991 and 2237 in the year 1991-1992. It was 2609 in the year 1992-1993 and decreased to 1801 during the year 1996-1997. Further it was increased to 2228 during the period 2000-2001 and it was 3015 in the year 2004-2005.
Q1 value was 2407 in the year 1990-1991 and 3893 in the year 1991-1992. It was 354 in the year 1993-1994 and increased to 1780 during the year 2000-2001. Again it decreased to 956.9 during the year 2006-2007, it was 1054, 696.5 and 3515 in the years, 2007-2008, and 2008-2009 respectively.

Q3 value was 7136 in the year 1990-1991 and gradually it increased to 46611 during the period 2009-2010. (Value in the table is Rs. in Cr.)

**Regression analysis of determinants of capital structure decisions**

This sections explains the determinants of capital structure practices in selected CPSEs group wise, i.e overall sample firms, Manufacturing Industry, Service Industry, Mining Industry, Power Industry.

This analysis has been carried out to examine weather the selected factors are determining the capital structure practices or not. For assuring the capital structure practices three ratios have been considered as dependent variables. They are A) Debt/Equity ratio B) Debt to Total assets ratio C) Net worth to Total assets. To determine the factors influence the capital structure practices, the fallowing ratios have been studied.

- Book value per share
- Earnings before Interest and Tax
- Earnings per Share
- Financial Leverage
- Grass Interest Coverage ratio
- Operating Leverage
- Sales
REGRESSION ANALYSIS

Regression model and variables

Since the sample contains data across firms in various industries, the panel data method is employed. This thesis adopts a method with one-time access and multiple analysis. The model is as follow:

\[ Y = C + aX_1 + bX_2 + cX_3 + dX_4 + eX_5 + fX_6 + fX_7 \]

C is a constant, \(a, b, c, d, e\) and \(f\) are separately the coefficient of \(X_1, X_2, X_3, X_4, X_5, X_6\) and \(X_7\)

\(Y\): capital structure ratios (Debt/Equity ratio, Debt to total assets ratio and Networth to total assets ratio.

\(X_1\): Book value per Share

\(X_2\): Earnings before Interest and Tax (EBIT)

\(X_3\): Earnings per Share (EPS)

\(X_4\): Financial Leverage (FL)

\(X_5\): Grass Interest Coverage ratio (GICR)

\(X_6\): Operating Leverage (OL)

\(X_7\): Sales

I) Regression analysis of capital structure determinants in overall sample firms:

The table 6.23 reveals that the factors determining the capital structure ratios in overall sample firms. The R square value is 0.529, this means 52.9 percent of change in dependent variable can be explained by the change independent variables. From the ANOVA table the p value is (0.192) higher than the significance level (0.01), so null hypothesis is accepted. Independently each independent variable does not have significant influence on debt/equity ratio.

P value significance and R square value implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are not significantly influencing the Debt/Equity ratio in overall sample CPSEs.

The table 6.24 elucidating that the weather selected factors is determining the Debt/Total assets ratio or not. The R square value is 0.911, which means 91.1 percent dependent variable (Debt to total assets ratio) can be predicted by independent
variables. ANOVA table clarify the p value is (0.000) lower than significance level (0.01), so null hypothesis is rejected. The below regression formula predict the dependent variable value from independent variables.

**Overall Debt to Total Assets ratio** = 32.360(constant) - 0.008*overall book value per share + 0.044*overall earnings per share + 0.128* overall financial leverage + 0.20*overall grass interest coverage ratio - 0.046*overall operating leverage - 1.248*overall sales. *(Adopted from regression table 6.9)*

Independently Earning per share only have significant influence on debt to total assets ratio with t value 5.765, but remaining independent variables do not have significant influence on debt to total assets ratio.

P value significance and R square implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are significantly influencing the Debt/Total assets ratio in overall sample CPSEs.

The table 6.25 the elucidating the weather factors are determining the Networth/Total assets or not. The R square is 0.752, which means 75.2 percent dependent variable (Networth to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value (0.011) is almost equal to significance level (0.01), so null hypothesis is rejected. The regression formula is

**Overall Networth to Total Assets ratio** = 34.779 (constant) + 0.005*overall book value per share - 0.01*overall EBIT - 0.103*overall EPS - 0.365*overall financial leverage - 0.032*GICR + 0.264*overall operating leverage + 0.001*overall sales. *(Regression Table - 6.25)*

Independently Earning per share only has significant influence on debt to total assets ratio with t value -3.842, but remaining independent variables do not have significant influence on debt to total assets ratio. P value significance and R square implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are significantly influencing the Networth/Total assets ratio in overall sample CPSEs.
II) Regression analysis of capital structure determinants of sample firms manufacturing industry:

The table 6.26 reveals the factors, which are determining the capital structure ratios of sample firms in manufacturing industry. The R square value is 0.602 that means 60.2 percent dependent variable can be explained by independent variables. From the ANOVA table the p value is (0.96) higher the significance level (0.01). So the null hypothesis is accepted. Independently each independent variable does not have significant influence on debt/equity ratio.
P value significance and R square implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are not significantly influencing the Debt/Equity ratio of sample CPSEs in manufacturing industry.

The table 6.27 elucidating that which factors are determining the Debt/ Total assets ratio in manufacturing industry. The R square value is 0.609, which means 60.9 percent dependent variable (Debt to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value is (0.089) higher than the significance level (0.01), so null hypothesis is accepted.

Independently each independent variable does not have significant influence on debt/equity ratio.
P value significance and R square implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are not significantly influencing the Debt/Total assets ratio of sample CPSEs in manufacturing industry.

The table 6.28 the elucidate that the factors, which are determining the Networth/Total assets ratio. The R square value is 0.439, which means 43.9 percent dependent variable (Networth to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value (0.363) is higher than significance level (0.01), so null hypothesis is accepted.

Independently each independent variable does not have significant influence on debt/equity ratio.
P value significance and R square implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and

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Sales) are not significantly influencing the Networth/Total assets ratio of sample CPSEs in manufacturing industry.

### III) Regression analysis of capital structure determinants of sample firms Service Industry:

The table 6.29 reveals the factors determining the capital structure ratios of sample firms in Service Industry. The R square is 0.869 that means 86.9 percent dependent variable can be explained by independent variables. From the ANOVA table the p value is (0.002) lower than the significance level (0.01). So the null hypothesis is rejected. The below regression formula give the dependent variable value from independent variables is

\[
\text{Service Debt/Equity ratio} = 0.404(\text{constant}) - 0.01 \times \text{service book value per share} + 0.001 \times \text{service earnings before interest and tax} + 0 \times \text{service earnings per share} + 0.143 \times \text{service Financial Leverage} - 5.887 \times \text{service grass interest coverage ratio} + 0.004 \times \text{service Operating Leverage} + 0 \times \text{service sales (From regression table-6.14)}
\]

Independently Book values per Share and Sales have significant influence on debt/equity ratio with t values -4.884 and 6.195 respectively and remaining independent variable does not have significant influence on debt/equity ratio.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) have significant influence on the Debt/Equity ratio of sample CPSEs in Service Industry.

The table 6.30 the elucidating the weather factors are determining the Debt/ Total assets or not. The R square is 0.704, which means 70.4 percent dependent variable (Debt to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value is (0.61) higher than significance level (0.01), so null hypothesis is accepted.

Independently Book value per Share only have significant influence on debt to total assets ratio with t value -4.257, but remaining independent variables do not have significant influence on debt to total assets ratio.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and
Sales) do not have significant influence on the Debt/Total assets ratio of sample CPSEs in Service Industry.

The table 6.31 elucidating the weather selected factors are determining the Networth to Total assets ratio or not. The R square is 0.669, which means 66.9 percent dependent variable (Networth to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value (0.091) is higher than the significance level (0.01), so null hypothesis is accepted.

Independently each independent variable does not have significant influence on debt to total assets ratio in Service Industry.

P value significance and R square implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) not having significant influence on the Networth/Total assets ratio of sample CPSEs in Service Industry.

IV) Regression analysis of capital structure determinants of sample firms Mining Industry:

The table 6.32 reveals the factors determining the capital structure ratios of sample firms in Mining Industry. The R square is 0.673 that means 67.3 percent dependent variable can be explained by independent variables. From the ANOVA table the p value is (0.087) higher the significance level (0.01). So the null hypothesis is accepted. Independently three independent variable (Book value per Share, EBIT and Sales with t values -3.208, 3.303 and -3.090 respectively) have significant influence on debt/equity ratio in Mining Industry and remaining factors do not have significant influence on debt/equity ratio in the same industry.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are not significantly influencing the Debt/Equity ratio of sample CPSEs in Mining Industry.

The tables 6.34 elucidating weather the factors are determining the Debt/ Total assets or not. The R square is 0.952, which means 95.2 percent dependent variable (Debt to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value is (0.000) lower than the significance level (0.01), so null hypothesis is rejected. The regression formula is
Mining Debt to Total Assets ratio = 37.810 (constant) -0.058 * mining book value per share + 0.009 * mining earnings before interest and tax + 0.004 * mining earnings per share – 1.785 * mining financial leverage + 0.001 * mining grass interest coverage ratio – 0.083 * mining operating leverage – 0.005 * mining sales (see regression table-6.34)

Independently Sales only have significant influence on debt to total assets ratio with t value -3.037, but remaining independent variables do not have significant influence on debt to total assets ratio.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are significantly influencing the Debt/Total assets ratio of sample CPSEs in Mining Industry.

The table 6.35 the elucidating the weather factors are determining the Networth/Total assets or not. The R square is 0.853, which means 85.3 percent dependent variable (Networth to total assets ratio) can be predicted by independent variables. ANOVA table clarify the p value (0.002) is lower than significance level (0.01), so null hypothesis is rejected. The regression formula is

Mining Networth to Total Assets ratio = 43.812 (constant) + 0.111 * mining book value per share - 0.018 * mining earnings before interest and tax - 0.003 * mining earnings per share – 1.006 * mining financial leverage + 0 * mining grass interest coverage ratio + 0.050 * mining operating leverage + 0.008 * mining sales. (see regression table-6.35)

Independently Book value per share, EBIT and Sales have significant influence on debt to total assets ratio with t value 3.840, -4.445 and 4.383 respectively but remaining independent variables do not have significant influence on debt to total assets ratio.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are significantly influencing the Networth/Total assets ratio of sample CPSEs in Mining Industry.
V) Regression analysis of capital structure determinants of sample firms Power Industry:
The table 6.36 reveals the factors determining the capital structure ratios sample firms in Power Industry. The R square is 0.914 that means 91.4 percent the independent variables are responsible to determine dependent variable. From the ANOVA table the p value is (0.003) less than the significance level (0.01). So the null hypothesis is rejected.

Power Debt/Equity ratio = 0.633 (constant) + 0 * power book value per share + 2.312 * power earnings before interest and tax + 7.907 * power earnings per share + 0.074 * power financial leverage - 0.032 * power gross interest coverage ratio – 1.064 * power operating leverage + 1.050 * power sales (see regression table-6.36)

Independently each independent variable does not have significant influence on debt/equity ratio except Financial Leverage has significant influence on debt/equity ratio in power industry with t value -4.384.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) have significant influence on the Debt/Equity ratio of sample CPSEs in Power Industry.

The table 6.37 the elucidating the weather factors are determining the Debt/ Total assets or not. The R square is 0.840, which means 84 percent independent variables (Debt to total assets ratio) are responsible to determine the dependent variable. ANOVA table clarify the p value is (0.022) higher than the significance level (0.01), so null hypothesis is accepted.

Independently Gross Interest Coverage Ratio only have significant influence on debt to total assets ratio with t value -2.633, but remaining independent variables do not have significant influence on debt to total assets ratio.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are not significantly influencing the Debt/Total assets ratio of sample CPSEs in Power Industry.

The table 6.38 the elucidating the weather factors are determining the Networth/Total assets ratio or not. The R square is 0.889, which means 88.9 percent dependent variable (Networth to total assets ratio) can be predicted by independent variables.
ANOVA table clarify the p value (0.007) is lower than significance level (0.01), so null hypothesis is rejected. The regression formula is:

Power Networth to Total Assets ratio = 57.819 (constant) + 0.065 * power book value per share – 0.004 * power earnings before interest and tax + 0.039 * power earnings per share - 1.979 * power financial leverage + 0.378 * power grass interest coverage ratio + 0.024 * power operating leverage + 0 * power sales (see regression table-6.38)

Independently all independent variables do not have significant influence on debt to total assets ratio.

P value significance and R square is implying that the independent variables (Book value per share, EBIT, EPS, Financial Leverage, GICR, Operating Leverage and Sales) are significantly influencing the Networth/Total assets ratio of sample CPSEs in Power Industry.

**Correlation Analysis:**

**Correlation Qualitative Assessment values**

Zero or Null – no correlation  
0.1 to 0.3 Weak correlation  
0.3 to 0.6 Regular correlation  
0.6 to 0.8 Strong correlation  
0.8 to 0.9 Very strong correlation  
1 perfect correlation  
-0.1 to -0.3 Negative weak  
-0.3 to -0.6 Negative regular  
-0.6 to -0.8 Negative strong  
-0.8 to -0.9 Negative very strong  
-1 perfect negative

I) the correlation analysis of capital structure determinants in CPSEs:

The table 7.48 reveals the correlation analysis of capital structure ratios determinants in overall sample CPSEs.

**Book value per share:** - It has strong positive correlation with EBIT, Sales, PAT, Return on Equity and Netwoth to total assets ratio, it has negative strong correlation with debt to total assets ratio and it has very strong positive correlation with 365 days average market capitalization at 0.01siginificance. It has regular correlation with
grass interest coverage ratio and it has negative regular correlation with earnings per share in overall sample CPSEs.

**EBIT**: - EBIT has at 0.01 significance level has very strong correlation with sales, PAT, return on equity and 365 days average market capitalization, it has strong correlation with GICR and it has regular correlation with networth to total assets, it has negative strong correlation with debt to total assets ratio. At 0.05 significance level it has negative regular correlation only with earnings per share.

**Financial Leverage**: - Financial leverage did not have significant correlation with other determinants, with capital structure ratios and also with corporate performance indicators at given 0.02 and as well as 0.05 significance levels in overall CPSEs.

Grass Interest Coverage ratio: - GICR has significant strong correlation with sales, 365 days average market capitalization, PAT and return on equity and it has regular correlation return on capital employed in overall CPSEs.

**Operating leverage**: - operating leverage in overall sample CPSEs at the 0.05 level significance has negative regular correlation with debt/equity ratio. It did not have significant correlation with other indicators.

**Sales**: - Sales has very strong correlation with PAT and return on equity and 365 days average market capitalization, it has negative strong correlation with debt to total assets ratio at 0.01 significance level in overall sample firms. At 0.05 significance level has regular correlation with networth to total assets in overall sample firms.

II) The correlation analysis of capital structure determinants in manufacturing industry:

**Book value per share**: - book value per share has very strong negative correlation 365 average market capitalization and PE ratio, it has strong correlation with EPS and it has strong correlation with EBIT, Sales and PAT at 0.01 significance in manufacturing industry. It has regular correlation with networth to total assets and it has negative regular correlation with debt to total assets ratio at 0.05 significance in manufacturing industry.

**EBIT**: - EBIT has very strong correlation with Sales, PAT and return on equity and it has very strong negative correlation with 365 days average market capitalization and P/E ratio and strong correlation with grass interest coverage ratio at 0.01 significance level. It has regular correlation with networth to total assets ratio and negative regular
correlation with debt to total assets ratio at 0.05 significance level in manufacturing industry.

**EPS:** - Earnings per share in manufacturing industry at 0.01 significance level has strong correlation with PE ratio and regular correlation with 365 days average market capitalization.

**Financial Leverage:** - In manufacturing industry financial leverage do not have significant correlation with other factors.

**GICR:** - Grass Interest coverage ratio at 0.01 level of significance has strong correlation with Sales, PAT and return on equity. It has negative regular correlation with 365 days average market capitalization and PE ratio at 0.05 significance level in manufacturing industry.

**Operating Leverage:** - In manufacturing industry operating leverage has regular negative correlation with debt/equity ratio only at 0.05 significance level.

**Sales:** - In manufacturing industry at 0.01 significance level sales has strong negative correlation with 365 average market capitalization and PE ratio, it has strong correlation with PAT and return on equity. At 0.05 significance level it has regular negative correlation with debt to total asset ratio and regular correlation with networth to total asset ratio.

**III) The correlation analysis of capital structure determinants in Service Industry:**

From the table 7.50 the data reveals the correlation of determinants in service industry.

**Book Value per Share:** - In service industry the book value per share at 0.01 significance level has very strong correlation with Sales and return on equity and very strong negative correlation with 365 days average capitalization debt to total assets ratio. It has strong correlation with EBIT. At 0.05 significance it has negative strong correlation with debt to total assets ratio in service industry.

**EBIT:** - Earnings before Interest and Tax at 0.01 significance level has strong negative correlation with EPS and negative strong correlation with negative correlation with 365 days average market capitalization. It has regular correlation with sales. It has regular correlation with return on equity and return on capital employed.
and negative regular correlation with debt to total assets ratio at 0.05 significant level in service industry.

**Earnings per Share:** - At 0.01 significance level it has strong correlation with 365 days average market capitalization and negative strong correlation with networth to total assets ratio. At 0.05 significance it has regular correlation with Pat and regular correlation with debt to total asset ratio.

**Financial Leverage:** - Financial leverage in service industry has regular correlation with return on assets at 0.05 significance level.

**Grass Interest coverage ratio:** - GICR did not have significant correlation with any other factors service industry.

**Operating Leverage:** - operating leverage at 0.05 significance level has regular correlation with PE ratio in service industry.

**Sales:** - sales in service industry at 0.01 significance level has very strong correlation with return on equity and negative strong correlation with 365 days average market capitalization. At 0.05 significance level it has regular correlation with debt/equity ratio.

**IV) The correlation analysis of capital structure determinants in Mining Industry:**

Mining Industry: - the table 7.51 reveled correlation between determinants and variables measure the corporate performance in mining industry.

**Book Value per value:** - In mining industry Book value per share has significant strong correlation with EBIT, Sales, PAT, return on equity and strong negative correlation with debt to total assets ratio and 365 days average market capitalization at 0.01 significance level. At 0.05 significance level it has regular negative correlation with financial leverage and regular correlation with networth to total assets ratio in service industry.

**EBIT:** - EBIT has significantly very strong correlation with Sales, PAT and return on equity and strong negative correlation with debt to total assets ratio and 365 days average market capitalization, it has regular correlation with networth to total assets ratio in mining industry at 0.01 significance level. At 0.05 significance level EBIT has regular correlation with return on capital employed and negative regular correlation with P/E ratio in mining industry.
EPS: - Earnings per share in mining industry at 0.05 level of significance has regular correlation with 365 days average market capitalization.

Financial Leverage: - Financial leverage has significant strong correlation with debt to total asset ratio and PE ratio and has negative strong correlation with network to total asset ratio at 0.01 significance in mining industry. At 0.05 significance level it has regular correlation with 365 days average market capitalization in mining industry.

Grass Interest coverage ratio and Operating leverage did not have significant correlation with any other factors in mining industry.

Sales: - Sales in mining industry at 0.01 significance has very strong negative correlation with debt to total assets ratio and 365 days average market capitalization and have very strong correlation with profit after tax and return on equity, it has strong correlation with networth to total assets ratio at 0.01 significance in mining industry. At 0.05 significance it has regular correlation with return on capital employed and has negative regular correlation with PE ratio in mining industry.

V) The correlation analysis of capital structure determinants in Power Industry:

Book value per share: - In power industry at 0.01 significance BV per share has very strong correlation with EBIT, Sales, PAT and return on equity and it has strong negative correlation with EPS, 365 days average market capitalization. At 0.05 significance level it has regular correlation GICR and negative regular correlation with Financial Leverage, debt to total assets in power industry in power industry.

EBIT:- Earnings before Interest and Tax at 0.01 significance has very strong correlation with sales, PAT and it has very strong negative correlation with 365 days average market capitalization and regular correlation with return on equity and return on networth and negative correlation with PE ratio in power industry. At 0.05 significance it has regular correlation with GICR and negative regular correlation with EPS in power industry.

EPS: - In power industry Earnings per Share has strong correlation with financial leverage and negative regular correlation with PAT at 0.01 significance level. At 0.05 significance EPS has regular negative correlation with GICR and Sales and regular correlation with 365 days average market capitalization in power industry.
Financial Leverage: - At 0.01 significance financial leverage has strong correlation with EPS and negative regular correlation with debt/equity ratio in power industry.

GICR: - In power industry GICR at 0.01 significance level has strong correlation with PAT, ROCE and RONW and strong negative correlation with 365 days average market capitalization and regular negative correlation with debt to total assets ratio. At 0.05 significance it has regular correlation with Sales and negative regular correlation with PE ratio.

Operating Leverage: - Operating Leverage did not have significant correlation with any other factors in power industry.

Sales: - Sales in power industry at 0.01 significance has very strong correlation with PAT and very strong negative correlation with 365 days average market capitalization. At 0.05 significance level sales has regular correlation with return on equity and return on networth and negative regular correlation with EPS and PE ratio.

Conclusion:
In this chapter the study was examined the factors which are influencing the capital structure practices of sample CPSEs in various groups.