Chapter – II

Review of Literature
CHAPTER II

REVIEW OF LITERATURE

2.1 INTRODUCTION

In this chapter, an attempt is made to review the existing studies on the topic under study pertaining to corporate finance structure (capital structure), firm value in terms of Market Value Added (MVA) and Tobin’s Q. The reviews regarding corporate finance structure determinants, determinants of firm values as well as regarding role of corporate finance structure in influencing the firm value are also undertaken in this chapter.

2.2 REVIEWS

Chudson (1945) provides direct evidence on the companies with high proportion of fixed assets tending to use more long-term debt. The researcher also indicated that there is no simple linear relationship between corporate size and debt ratio\(^1\).

Modigliani and Miller\(^2\) (1958) studied how the market value of a firm is affected by the volume and structure of its debts. The central proposition of their study gave a clear answer to the proposition that either the volume nor the structure of the debts affect the value of the firm, provided that financial markets work perfectly and there are no taxes and there are no bankruptcy costs.


Gordon (1962) found that gearing increased with size; return on investment is negatively related with debt ratio and also confirmed the negative association between operating risk and debt ratio³.

Modigliani and Miller (1958, 1963) published papers in two seminars in which they argued that under certain assumptions the average cost of capital to any firm is completely independent of its capital structure and that firms maximize their market value by maximizing their use of debt financing. The issue of corporate capital structure choice was brought to center stage till then⁴.

Solomon (1963) argued that the cost of debt does not always remain constant. When the leverage level exceeds the accepted level, the probability of default in interest payments increases, thus raising the cost of debt⁵.

Baxter (1967) in his paper entitled “Leverage, risk of ruin and the cost of capital”, reported that leverage will depend on the variance of net operating earnings. Since businesses with relatively stable income streams are less subject to the possibility of ruin, they may find it desirable to rely relatively on debt financing.

Hence, he concluded the negative association between variance of net operating and leverage⁶.

Gupta (1969) conducted a study on the financial structure of American manufacturing enterprises. The focus of the study was on analyzing the industry effect, the size effect, and the growth effect on the financial structure relationship of American manufacturing enterprises. It was a cross-section study for the year 1961-62. The study confirmed that total debt ratios were positively related to

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³ Gordon M.J; “The investment financing and valuation of the corporation”; Homewood III Irwin; 1962; P.169
⁴ Ravind r Vinayak and Ravi Kumar Gupta; “Determinants of capital structure of corporate giants in India”; The Indian Journal of Commerce; Vol.55; No.4; Oct-Dec.2002; P.4S
⁵ Raj S. Dhankar and Ajit S.Boora; “Cost of capital optimal capital structure and value of the firm-An empirical study of Indian companies”; Vikalpa; Vol.21; No.3, July-Sept 1996; P.68.
growth and negatively related to size. He also found significant industry effect on debt ratio. He further observed that ‘family pattern of ownership’ is an important determinant of leverage in the paper and allied product industry.

Scott (1972) has presented an article on the importance of financial structure. The objective of his study was to present evidence on whether the importance of the financial structure of the firm has in practice been confirmed by corporate decision makers. The one-way-analysis of variance was the statistical test employed. It tests the null hypothesis that the difference among the population means of various industrial classes sampled is zero. Ultimately, the null hypothesis was rejected. The study found that the financial structure of firms in the various industry classes was significantly different and hence underlines the importance of the financial structure of the firm.

Toy (1974) reported that higher operating risk companies showed some tending towards higher debt ratio. They found that debt ratios were positively related to growth, typically measured as sales growth, and return on investment to be negatively correlated with the debt ratio. They also conducted that the corporate size and the industry-class do not appear to be determinants of debt equity ratio.

Remmer et al (1974) pursued research on the topic ‘Industry and size as debt ratio determinants in manufacturing internationally’. The purpose of their study was to report the results on an international test of the hypothesis that the industry and the corporate size are the determinants of debt ratio. To determine if industry is a determinant of debt ratio in the United States, a one-way analysis test was run on firms from the hypothesis that industry is a determinant of debt manufacturing industries in five developed countries viz., France, Japan, Netherlands, Norway and appear to be a determinant of corporate debt ratio in the manufacturing sectors of the

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8 Scott D.F. Jr; “Evidence on the importance of financial structure”; Financial Management Vol.; No.2; 1972; PA5.
9 Toy. N; “A comparative international study of growth, profitability, and risk as determinants of Corporate debt ratios in the manufacturing sector”; Journal of Finance and quantitative analysis Vol.9; No.3; P,875.
Netherlands, Norway and the United States. It does appear to be a determinant in France and Japan. So far as the corporate size is concerned, they also found that size does not appear to be a determinant of debt ratio. He suggested that certain institutional variables, earning rate seem to be more important as determinants of debt ratio internationally\(^\text{10}\).

**Scott and Martin (1975)** analyzed the industry influence on financial structure. They have tested the null hypothesis of no relationship between industry and financial structure by using a parametric one-way analysis of variance, as well as, the nonparametric Kruskal Wallis one-way analysis of variance by ranks. They concluded that industry-class is indeed a determinant of financial structure. They also concluded that corporate size is the determinant of firm’s financial leverage ratio\(^\text{11}\).

**Taub (1975)** used logit analysis to examine 172 issues of equity and bonds made in 1960-69 with the help of certain explanatory variable. He concluded that uncertainty of earning variable was negative although not significant. The size of the firm had a positive impact on the desired debt-equity ratio. The tax rate was found to be negatively associated with debt-equity ratio. The estimated co-efficient of the period of solvency variable was negative. Finally, the co-efficient of debt-equity ratio was negative but not significant\(^\text{12}\).

**Schmidt (1976)** observed a significant industry effects on debt ratio and found the return on investment to be negatively associated with the debt ratio. He looked at the composition of debt and found that large companies had more long term debt and vice versa but found a negative correlation between total debt and the proportion of fixed assets\(^\text{13}\).

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\(^{10}\) Remmers L. Stone Hill A. Wright Rand Beekhuisen T; “Industry and size as debt ratio determinants manufacturing internationally”; Financial Management; Vol.3; No.2; Summer 1974; P.24.

\(^{11}\) Scott D.F. Jr. and Martin J.F; op.cit; P.67.

\(^{12}\) Taub A.J.; “Determinants of the firm’s capital structure”; Review of economic and statistics; Vol.5; P.410.

\(^{13}\) Schmidt R; “Determinants of corporate debt ratios in Germany”; European finance association 1975 proceedings Amsterdam; North Holland; 1976.
**Carelton (1977) and Silberman** have concluded that higher the variability is in rate of return on invested capital, the lower will be the degree of financial leverage adopted. Hence, it is the variance, not the rate of return that is the ultimate determinant of leverage; they also found the ROT to be negatively correlated with the debt ratios\(^{14}\).

**Scott (1977)** suggested that, by selling secured debt, firms increase the value of their equity by expropriating wealth from their existing unsecured debtors. Issuing debt secured by assets with known values also avoids higher interest costs. For this reason, firms with assets, that can be used as collateral may be expected to issue more Long-term debt and hence, total debt to take benefit of this opportunity. The hypothesis that was tested is whether the collateral value of assets is positively related to total debt and long-term debt\(^{15}\).

**Myers (1977)** commented on the problem by noting the existence of an important gap in financial theory regarding the issue of corporate debt policy. It further implied that the theory does not explain why tax savings generated by debt do not lead firms to borrow as much as possible\(^{16}\).

**Miller (1977)** challenged the trade off theory. He argued that bankruptcy and agency costs are too small to offset the tax advantage of debt. But when personal taxes are taken into account, this advantage is completely offset by the disadvantage of personal tax rate. Thus, in equilibrium, the value of a firm is independent of its capital structure, even when the market is imperfect\(^{17}\).

**Smith (1977)** argued that the cost of issuing debt and equity securities is also related to firm size. In particular small firms pay much more than the large firms to issue new equity and also some what more to issue long-term debt. He suggests that small firms may be more leveraged than large firms do and may prefer to borrow short-term (through private loans or bank loans) rather than issue long-term debt

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15 Ram Kumar Kakani; “The Determinants of capital structure - An econometric analysis”; finance India; Vol.XJTT; No.1; Mar.1999; P.51.
16 Ravinder Vinayak and Ravi Kumar Gupta;op.cit; P.46.
17 Raj S. Dhankar and Ajit S.Boora; op.cit; P.54.
because of lower fixed costs associated with alternative. Thus, an inverse relationship is expected between size and total debt; and between size and long-term debt. No prediction is made regarding the effect of size on short-term debt.

The size measures selected were average total sales, average total assets and the natural logarithm of average assets. The logarithmic transformation of assets reflects the view that a size effect if it exists, affects mainly the small firms\(^{18}\).

Chakarboty\(^{19}\) (1977) had undertaken a study to investigate debt-equity ratio in the private corporate sector in India. He had tested the relationship 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 related to debt-equity ratio.

Ferri and Jones\(^ {20}\) (1979) examined the determinants of corporate financial with objective of investigating the relationship between a firm’s financial structure and its industrial class, size, variability of income and operating leverage. They found that a firm’s use of debt is related to its size, but the income could not be shown to be associated with the firm’s leverage. Finally, operating leverage does influence the percentage of debt in a firm’s financial structure and the relationship between these two types of leverage is similar to the negative linear form which financial theory suggests.

Errunza (1979) entitled in his paper “Determinants of financial structure in Central American Common market “based on a study on the determinants of financial structure in the Central American Common Market (CACM) countries using a consistent database obtained from primary sources has chosen approximately 15 large domestic private sector companies four each for the Central American

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18 Ram Kumar Kakani; op.cit; P.51.
Countries (Costa Rica, Guatemala, Honduras and Nicaragua). To test the hypothesis, two-way ANOVA as well as, Kruskal-wallis one-way ANOVA by ranks were used.

This study supports the hypothesis that there are statistically significant differences in the financial structures of different industries in the CACM countries. Such variations have persisted over a reasonable time span. The effect of country factor is not as strong as industry classification21.

Ferri and Jones (1979) examined the determinants of financial structure. The objective of their study was to investigate the relationship between a firm’s financial structure and its industrial class, size, variability of income and operating leverage. They found that the industry-class was linked to a firm’s leverage, but not in a direct manner than what has been suggested in other researches. Secondly, a firm’s use of debt is related to its size, but the relationship is not agreed with other researches. But the relationship does not conform to the positive, linear scheme that has been income could not be shown to be associated with a firm’s leverage. Finally, operating leverage does influence the percentage of debt in a firm’s financial structure and the relationship between these two types of leverage is quite similar to the negative, linear from which financial theory suggests22.

Bhat (1980) conducted a research on the “Determinants of financial leverage” by selecting 63 units of engineering industry in India. He has examined the effect of various determinants of financial leverage, such as firm’s size, variation in income, growth, profitability, operating leverage, dividend payout and regression. He observed that (a) firm’s financial leverage is not associated with its size; (b) the negative relationship between financial leverage and co-efficient of variation between financial leverage and in EBDIT(Earnings before Depreciation, Interest and Tax) shows that risky firms are more likely to employ low percentage of debt in their financial structure; (c) firms growth rate does not seem to be associated with firm’s leverage, and the relationship does not turn out to he positive as indicated in

21 Errunza V.R.; Determinants of financial structure in the Central American common Market; financial Management; Vol.8; No.3; Autumn 1979; P. 72.
22 Ferri M.G and Jones W.H; “Determinants of financial structure -. A new methodological approach”; Journal of Finance Vol.34; No.3; June 1979; PP.631-632.
other works; (d) there is negative relationship between dividend payout and leverage ratio, though cause-and-effect relationship has been related with leverage; (e) the degree of operating leverage does not influence the use of debt; and (f) financial leverage and debt service capacity have been found to be negatively related.

De Dangelo and Masulis (1980) suggested a model of optimal capital structure that incorporates the impact of corporate taxes, personal taxes and non-debt related corporate tax shields. They argued that tax deductions for depreciation and investment tax credits are substitutes for the tax benefits of debt financing. As a result, firms with large non-debt tax shields relative to their expected cash flow include less-debt in their capital structure.

Masulis (1983) carried out a study entitled the impact of capital structure change on firm’s value. Some estimates model based on current corporate finance theories model developed explains stock returns associated with the announcement of issue exchange offers. The major independent variables are changes in leverage multiplied the senior security claims outstanding and changes in the debt tax shields. The results along others were obtained and they indicated that changes in leverage; change in non-convertible -senior security prices are negatively related to the debt ratio and the changes in firm values are positively related to the changes in firm debt level.

Venkatesan (1983) investigated the determinants of financial leverage by analyzing the relationship between seven different variable and the financial structure of firms. The variables included industry categorization, size, operating leverage, debt coverage, cash flow coverage, business risk and a growth ratio. Industry influence has been examined on the grouping of firms in various leverage classes and he found a statistical relationship between industry class and leverage but the relationship could not be significant and conclusive. The impacts of remaining independent variables on the dependent variables was examined in two

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23 Bhat, Ramesh K “Determinants of financial leverage: Some further evidence”; The Chartered Accountant; Vol.29; No.6; Dec.1980; PP.451-452.
24 Ram Kumar Kakani; op.cit;P.69.
25 Masulis R. W; “The impact of capital structure changes on firm value: Some estimates”; The journal of finance; Vol XXXVIII; No.1; Mar.1983; P.107.
sample classifications, viz., and intra-industry and inter-industry through multiple regression analysis. In summation only debt coverage ratio was found to be the important variable significantly affecting the financial structure firms\textsuperscript{26}.

**Myers (1984)** contrasts two ways of thinking static trade off framework and a pecking-order framework. In a static trade off framework, a firm has a target debt to value ratio and gradually moves towards it. The pecking order theory states that firms prefer retained earnings to external financing. And, if funds requirements exceed retained earnings, then debt is preferred to equity. He argued that firms avoid financing real investment opportunity either by issuing equity or by risky securities because of difficulty in pricing external equity correctly due to information asymmetry between the management and the shareholders and the dilemma of sharing benefits of positive NPV projects with outsides. The professional management avoids relying on external finance because it would subject the firms to the discipline of the \textit{\textquoteleft}, capital market. The pecking-order theory does not imply a well-defined debt to value ratio. The ratio will vary as capital expenditure and retained earnings change\textsuperscript{27}

**Manoj Anand(1984)** showed that in case of information asymmetry between the investors and the management about the value of the firm’s assets, when the market might misprice equity. If the firms are required to finance new projects by issuing equity, the under pricing may lead to the benefit of new investors at the cost of existing investors, as they may capture value greater than the NPV of the project. In this situation, the positive NPV project might be rejected. This under investment can be avoided, if the firms finance the project by using security that is not undervalued by the market such as retained earnings or debt\textsuperscript{28}.

**Pandey (1984),** study of 30 Indian firms, probes corporate manager’s conceptual understanding of the cost of capital and optimum capital structure. Most

\textsuperscript{26} Venkatesan S; \textit{“Determinants of financial leverage: An empirical extension”}; The Chartered Accountant; P.519.

\textsuperscript{27} Manoj Anand; \textit{“Corporate finance practices in India: A survey'}; Vikalna Vol.2?; No.4; Oct-Dec.2002; Dec.2002;P.

\textsuperscript{28} Manoj Anand; \textit{“A review of research on the practices of corporate finance’}; South Asian Journal of Management; Vol.9; No.3; July-Sept.2002; P.46.
of the respondents consider equity share capital as the most expensive and long-term debt as the least expensive sources of finance. The low cost of debt due to, tax advantage of interest and long procedures involved in the issue of equity capital led to strong preference for debt by the managers\textsuperscript{29}

Richard Kofondy and Diane Rizzuto Suhler (1985) indicates that “shareholders of firms announcing new equity, issue experience significant, abnormal, negative returns and that these returns are inversely related to the magnitude of the capital structure change caused by the new issue’ No relationship is shown between shareholders return and the firms pre-issue degree of financial leverage\textsuperscript{30}

Friend and Lang (1987) examined 984 NYSE firms from 1970 to 1983 to test whether capital structure decisions are at least in part motivated by managerial self interest The study found results, which showed that the level of debt decreased as the level of management investment in the funds increases, reflecting the greater non diversifiable risk of debt to management than to public investors for maintaining a low debt ratio This finding is independent of the existence of non-management principal stockholders who are assumed to have sufficient investment in the firm to warrant the effort required for monitoring and to influence managerial appropriately. However as a result where corporations have large non- managerial investors, the average debt ratio is significantly higher than in those with no principal stockholders, which may suggest that the existence of large non-managerial stockholders might make the interest of managers and public stockers coincide\textsuperscript{31}

Sherida Titnian and Roberts (1988) Wesels in their paper entitled “Determinants of Capital structure” analysed about the theories of optimal capital structure The study extends in three ways, firstly, it examines about the set of capital structure theories of which many of them have not been analysed empirically.

\textsuperscript{29} Manoj Anand; op,cit; P.68.
\textsuperscript{30} “Richard Kofondy and Diane Rizzuto Suhler; ‘‘Changes in capital structure New equity issues and scale effects’’; The journal of financial research Vol. VIII; No.2; P.127.
Secondly, since the theories have different empirical implication with regard to different types of debt instruments the authors have analysed measures of short-term, long-term and convertible debt rather than an aggregate measure or total debt. They have used a factor-analytic technique for estimating unobservable attributes on the choice of corporate debt ratios. They suggested that the firms with unique or specialized products have relatively low-debt ratios. Uniqueness is categorized by the firm’s expenditures on research and development. They have suggested that the model found does not support for the theoretical work and that predicts that the debt ratios are related to a firm’s expected growth, non-debt tax shields and they found some support for the preposition that profitable firm’s have relatively less debt relative to the market value of their equity. Importance of transaction cost is provided by the negative relation between measures of past profit ability and current debt levels scaled by the market value of equity and thus, indicates that transaction costs may be one of the important determinants of capital structure choice.32

Titman and Wessels (1988) in their study entitled “The determinants of capital structure choice” used a factor - analytic technique to estimate the impact of tin observable attributes on the choice of corporate debt. The results indicated that short term debt ratios were negatively related to the firm’s size. The results further showed that the negative relation to the debt level scaled by the market value of equity. However, the results did not provide support for an effect on debt ratios arising from assets compositions and the growth rate.33

Titman et al.34 (1988) analysed the determinants of capital structure choice by using 469 samples of manufacturing firms of US over a period 1974-1982. They examined a set of capital structure theories and their empirical implication with regard to their different types of instruments and used a factor analytic technique for estimating the impact of unobservable attributes on the choice of corporate debt ratios. Transaction costs were found

32 Sheridan Titnian and Roberto wessels; “The determinants of capital structure”; The Journal finance; VoI.XLHH; No.1; March 1988; PP.1-2.
33 Titman. Sand wessels. R; op.cit; P.1.
to be an important determinant of capital structure choice. The long and the short term debt ratios were shown to be negatively related to firm size. The study revealed that various leverage related costs and benefits were not particularly significant in deciding the level of leverage.

**Pinegal’ and Wilbricht’s (1989)** survey of fortune 500 firms indicates that retained earnings is the first choice of the financial officers (85%) for financing long term projects, 40% of the respondents indicate equity as a last choice of alternatives for raising capital, 60% of the firms indicate that they prefer to use debt and preferred stock to avoid dilution in control of common stockholders. 75% of the respondents agree that the firm’s value, stable cash Haws and financial independence significantly influence the capital structure decision of the firm35.

**Rao (1989)** conducted a research on debt equity analysis in chemical industry. He selected 30 chemical companies and examined correlation between debt - equity ratio on the one hand, age, size, retained earnings and profitability on the other. The negative correlation between retained earnings and the debt - equity ratio indicated earnings had low debt - equity ratio. He also observed that in case of high debt equity ratio, the profitability declined due to large payment of interest. However, he observed a positive correlation between debt - equity ratio and the size measured in terms of total assets and net assets Apart from this he also examined the trends and pattern in the equity ratio36.

**Mathew (1991)** made an attempt to analyse the relationship between ownership structure and financial structure with a view to know whether the former has any impact on the latter The analysis was based on three hypothetical relationships that exist between ownership structure on the one hand and unsystematic risk, non-manufacturing expenses and profit appropriation policies on the other and their impact on the firm’s financial structure He concluded that where the management’s stake is high, the leverage will be low and vice-versa, and there

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35 Manoj Anand; op.cit; P.46.
exists a significant relationship between ownership structure and financial structure of firms\textsuperscript{37}.

**Chuchang (1992)** in his paper entitled “Capital structure as an optimal contract between employees and Investor” says about the contractual arrangement between optimal contract between investors and employees, and it derived in terms of debt, equity and are the most important stockholders in the firm. He analysed the contracting problem between employees and investors It shows that the firm’s capital structure can be part of optimal contract Optimal contract problem cannot be explicitly the answer. He has found that there are two problems “shrinking problems and stealing problems” of employees. The models deal with shrinking problem and the contract structure is to motivate them to work.

Financial contract can be obtained in the models and that deal with stealing problems. The only feasible external financing is through debt, because the firm’s true income is unverifiable without cost and the employees can steal it for their own consumption. Leverage can be used as an instrument to transfer wealth between investors and employees. The transfer can go in either direction. Leverage level and the employee’s compensation level are jointly determined. And thus explains how stock prices react to the announcement of exchange offers, how earnings per share diluted by decrease in leverage and why employee’s claims are generally senior to those of the investor.

The model may be used to explore further the interactions between capital market and labour market. Since the employees and the investors may prefer different ways to finance new profits. The firms governance and ownership structure may play a role in how financing decisions is based on the information asymmetry\textsuperscript{38}.

**Ashok Korwar and Raghunathan (1993)** in their paper entitled “Cost of capital specifications and capital structure decisions - some conceptual propositions for practising managers” attempted to bridge the gap in doing this, it offers assumed

\textsuperscript{37} Mathew T.; “Optimal financial leverage -The ownership factor”; Finance India, V 01.5; No.2; P.20

\textsuperscript{38} Chun Chang; “The capital structure as an optimal contract between employees and investors”; “The Journal of Finance; Vol.XLVU No.3; July 1992; P.1141.
role approach for managers taking financial decisions. They have pointed out that these advances in capital structure theory have implications for managers engaged in taking capital budgeting decisions as well. In fact, they have proposed a two-step solution to the overall capital structure cum capital budgeting problem which explicitly details with the fact that the two kinds of decisions are made at different levels in the organizations. The authors have argued that the nation of an after tax cost of debt is intuitively unappealing\textsuperscript{39}.

**Subarna Sarkar (1994)** suggests that the success of corporate enterprises mostly depends upon the successful management of its capital structure, which depends on the investment of the funds from the numerous sources to the total capitalization such as share capital, long term - loans, and reserves and surplus. The study indicated that there is a greater debt - oriented financing in public sector enterprises over the period and the positive trends of private sector companies show that such profits are retained in business for augmenting the resources\textsuperscript{40}.

**Rajeswar Rao and Sadanandam (1995)** are in view that the process of capital structure planning is not a one-time job, but needs reviews, revision and monitoring all the time in different situations. It appears that finance executives of state enterprises are not paying adequate attention to the multi-dimensional implication of the capital\textsuperscript{41}.

**Myers (1995)** developed “modified pecking order” theory. He argues that firm avoids financing real investment opportunity either by issuing equity or by risky securities because of difficulty in pricing external equity correctly due to information asymmetry between the management and the shareholders; and dilemma to share benefits of positive NPV projects with outsiders. The firm has target dividend payout ratio so that normal investments could be made through internally generated funds. The firm may finance normal investments through debt issue but it

\textsuperscript{39} Ashok Korwar and Rogunathan; “Cost of capital specifications and capital structure decisions: Some conceptual propositions for practicing managers”; Vikalpa Vol.18; No.2; Apr-June 1993; P.3.

\textsuperscript{40} Subarna Sarkar: “Capital structure and productivity of capital in Indian corporate sector”; Finance India; Vol VIII; No.2; PP.399-400.

tries to be close to default - risk free. It is so to avoid any material cost of financial
distress and also to maintain financial flexibility in the form of reserve borrowing
power. The firm will exhaust its ability to issue safe debt first, since its dividend
policy is sticky and investment opportunities fluctuate relating to internal cash
flows. Then it may resort to risky debt and other hybrid securities before issue of
common stock. The pecking order theory does not imply a well-defined debt to
value ratio. The ratio will vary as capital expenditure and retained earnings change.

MM assumed that shareholders have the same information about the future
prospects of the firm and its management. But the reality is that management has
better information about the firm’s prospects than the outside investors do financial
economists call it as information asymmetry\textsuperscript{42}.

\textbf{Rajan and Zingales}\textsuperscript{43} (1995) studied the capital structure of G-7
economies in the U.K. They found that the mix of financing between debt and
equity is positively related to tangibility (the proportion of fixed assets to total
assets) and the size of the company. But it is negatively related to the level of
profitability and market to book ratio.

Barclay, Smith Jr and Watt’s (1996) who studied 6,700 industrial companies
over the past 30 years indicate that the most important determinant of a firm’s
leverage ratio and dividend yield is the nature of its investment opportunities. The
firms with large intangible growth opportunities have significantly lower leverage
ratios and dividend yields, on an average than the companies whose values are
represented primarily by tangible assets. The explanation given for this pattern of
financing is that high leverage and dividends can control free cash flow problems in
case of mature firms with limited growth opportunities. For high growth firms, the
under investment problem associated with heavy debt financing and the floating cost
of high dividends make both policies potentially costly. The study did not confirm
the pecking -‘order hypothesis\textsuperscript{44}.

\textsuperscript{42} Manoj Anand; op.cit; P.28
\textsuperscript{44} Manoj Anand; op.cit; P.44.
Raj S Dhankar and Boora (1997) in their paper entitled “the cost of capital, optimal capital structure and the value of the firm” expressed that there exists an optimal capital structure in Indian companies, both at the Macro and Micro level and whether financing decisions affect value of a firm and to test whether there exists an optimal capital structure in Indian companies. And the paper also tries to examine whether the financing decisions affect the value of a firm. They have used three models to show the existence of an optimal capital structure.

First model shows that the capital market is perfect, due to the value of a firm and its cost of capital is independent of its capital structure. There does not exist an optimal capital structure. Second model shows that the value of a firm increased with increase in debt level. The model assumes bankruptcy, agency and related costs to be too insignificant to affect the value of a firm. But it falls to answer the question How long will the value increase with increase in the debt level? Third model advocates the existence of an optimal capital structure, which is a trade off between tax advantage and disadvantage of leverage. From the analysis it was found that there is no definite relationship between change in the capital structure and the value of a firm at the Macro level. This is because of the fact that the value of firm is affected by multiplicity of factors and capital structure.

Palvannan (1998) conducted a study on capital structure of selected industrial units in Tamilnadu with the objective of evaluating the applicability of capital structure theories in the selected industrial units in Tamilnadu; analyzing the various factors influencing capital structure in practice and to denote the relationship between debt and equity components of the selected industrial units. He found out that the result of MM approach did not affect the capital structure changes of the firm and the cost of capital is not affected by the capital structure changes.


45 Raj S. Dhankar and Boom; op.cit; P.29.
46 Palvannan A; “A study on capital structure of selected industrial units in Tamilnadu”; Unpublished L.Philthc's; Department of Commerce; Annamalai University; Aug. 1997.
relationship between corporate capital structure, dividend and cost of capital. A non
recursive model which allows for a nonlinear relationship between cost of capital
and capital structure is fitted to annual and internal data for a sample of New York
stock exchange (NYSE) firms.

The sample consists of firms traded in the New York stock exchange for the
period 1973 to 1990 with the sample size of 151 firms. The firms in the sample met
the following criteria: a) availability of accounting data for the sample period b)
fiscal year ends in December c) availability of monthly stock and S & P 500 Index
returns (on CRSP) for the sample period and d) not in financial (SIC 6022-6200)
industry

The proponents of the static tradeoff theory have suggested that corporations
can achieve unique optimum capital structure that minimizes their cost of capital47

Kakani48 (1999) attempted to find out the determinants of the capital
structure and its maturity in India and he had analyzed measure of short-term
and long-term debt rather than an aggregate measure of total debt. He also
analyzed the empirical implications of liberalizations of the Indian Economy
‘on the determinants of capital structure of the firms’.

industry -class and ownership pattern on corporate capital structure in India” tested
the following two hypothesis: a) the capital structure is influenced by industry- class
b) the capital structure is influenced by ownership pattern.

For the purpose of this paper, top 209 against companies of the private sector
in India were selected. The companies were ranked on the basis of their total assets
for the year 1989-90. The result shows significant influence of industry - class on

47 Arjun Chatrah, Ravindra Kamath, Sanjay Rainchander and Mukesh K. Choudary; “Cost
of capital, Capital structure and dividend policy: Theory and evidence”; Finance India
Vol.XI; No.1; Mar. 1997; PP.910
Analysis”, Finance India, Vol.XII, No.1, March, pp.51-69.
debt equity ratio and confirms the expected impact of ownership pattern on corporate capital structure\textsuperscript{49}.

Bevan and Danbolt \textsuperscript{50} (2001) also highlights company size, profitability, tangibility, growth opportunities, non-debt tax shields and dividend as possible determinants of the capital structure choice. The focus of this study is to discuss these factors influencing the capital structure of quoted companies.

According to Myers (2001), there is no universally accepted theory of the debt-equity choice. Yet, there are several useful theories as identified earlier each of which helps to understand the debt-to-equity structure that firms choose. These theories can be divided into two groups – either they predict the existence of the optimal debt-equity ratio for each firm (so-called static trade-off models) or they declare that there is no well-defined target capital structure (pecking-order hypothesis).

Joshi (2002) in his article entitled “Indian pharmaceutical industry at crossroads” examined the challenges that lie ahead for the Indian pharmaceutical sector. Indian pharmaceutical companies are facing the most daunting task of all developing newer drugs for a highly competitive worldwide market that demands rigorous testing and imposes strict, often widely varied regulations.

Indian and multinational pharmaceutical companies were moving in directions opposite to each other. Multinationals were closing down unprofitable products, and products which did not match their global profile and cutting down on expenses while the Indian companies followed the same

\textsuperscript{49} Singla R.\_ Mittal R.K.: “Influence of Industry - class and ownership pattern on corporate capital Structure in India”; Finance India Vol.XI; No.1; Mar. 1997; PP.17-IS.

old-fashioned way of operating. Indian companies were under tremendous pressure owing to higher raw material’ costs, interest burden because of liquidity in the market\(^5\).

**Fama and French\(^5\) (2002)** argued that dividend and debt convey information about profitability, which clearly shows the tax effects of finance decision. They have discussed how a firm’s value is related to dividend and debt. Accordingly, simple tax hypothesis says that firm value is negatively related to dividend and positively related to debt. With a good control for profitability, one can show how the taxation of dividend and debt affect the value of a firm.

**Bhaduri\(^5\) (2002)** attempted to study the capital structure choice of developing countries through a careful study of the Indian corporate sector. He used factor analytical model to determine a minimum number of unobservable common factors by studying the co-variance among a set of observed variables. He found that growth, size cash flow, uniqueness, and industry character influenced a capital structure of variation of corporate firms.

**Cassar and Holmes\(^5\) (2003)**, in their study, showed that the asset structure, profitability and growth were important factors which affected the debt equity ratio of the firms based on the results of regression analysis. Size and risk showed weaker influences on the debt financing of the firms. Their results were consistent with the static trade off, pecking order and agency cost

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\(^5\) Joshi G.P.; “Indian Pharmaceutical industry at crossroads”; Indian Management Vol.37; No.1; PP.4&47


theories. They proved that the theories applicable on capital structure of large firms are valid for small and medium enterprises of Australia.

Chaplinsky and Niehaus\(^{55}\) (2003) have indicated that firms can influence its value by varying its ratio of debt and equity. The main argument is that firms need to find an optimal combination of debt and equity that will ultimately increase the overall value of the firm. Therefore, it appears that the decisions regarding capital structure could impact on the success and future prosperity of the firm.

Huang and Vu\(^{56}\) (2003) have observed that a firm has three main sources of financing, also called capital components (at their disposal to fund new investment opportunities. It includes the use of retained earnings (internal equity), issuing new shares (external equity) or borrowing money through debt instruments (debt capital). These sources of financing constitute the capital structure of a firm and also reflect the ownership structure of the firm.

Suresh Babu and Jain .P.K (2003) in their paper entitled “The capital structure of India multinational corporates” found that capital structure practices followed by the Indian (private) corporate enterprises in comparison with foreign controlled companies in India assume vital significance in corporate finance due to their influence both on the returns and the risk of corporations. The paper also discusses the majority policy implications of comparative practices of the capital structure with a focus on the new liberalized and globalised business environment in India. In their paper they have observed that the foreign controlled companies (FCC) differ


significantly from Indian companies in their capital structure practices. As far as the use of short-term debt is concerned, Dc’s (Domestic companies) has a higher debt servicing capacity (almost double) than FCC’s. Capital structure of the Dc’s will increase the gravity of risk involved unservicing debt by these firms. Their evidence does not indicate any major significant changes in the capital structure practices of FCC’s as well as Dc’s, during the initial phase of the post-liberalized period.

The financial risk and operating risk of Dc’s has increased significantly in the period. The paper draws the point that the Indian companies from the equity based MNC’s capital structure and the Government should, through a fiscal and monetary policy mix evolve a good equity culture in the country. For which sound entrepreneurial and management practices, good equity earnings are also very important.

Baral (2004) had examined the determinants of capital structure of the companies listed to Nepal Stock Exchange Ltd. He used size, business risk, growth rate, earning rate, dividend payout, debt service capacity and degree of operating leverage as the predictor variables. The multiple regression technique has been used to assess the influence of defined explanatory variables on capital structure. In the preliminary analysis, manufacturing companies, commercial banks, insurance companies, and finance companies were included. However, due to the unusual sign problem in the constant term of the model, manufacturing companies were excluded in final analysis. This study shows that size, growth rate and earning rate are statistically significant determinants of capital structure of the listed companies.

57 Suresh Babu and Jam P.K; “Capital Structure of Indian multinational corporate”: South Asian jprnal of Management: Vol.3: July-Sep, 98; PPJ4-75.

According to Brigham and Daves\textsuperscript{59} (2004) absolutely nothing is more important to a new business than raising capital. The way that money is raised can, however, have an enormous impact on the success of a business. This argument may be applicable to all businesses and not only to new businesses. How a firm chooses the combination of debt and equity in their capital structure depends on various factors such as the characteristics of the firm, the economy and the perceptions and objectives of the managers.

According to Chen and Hammes\textsuperscript{60} (2004) Profitability indicates how efficiently management utilizes its total assets in order to generate earnings. Shareholders are concerned with the profitability of a firm because this can predict the future earnings of that firm. Outside investors will, therefore, include profitability in their analysis of the firm when making investment decisions. Traditional financial literature states that profitable firms can employ more debt because they are exposed to lower risks of bankruptcy and financial distress.

Pandey\textsuperscript{61} (2004) opines that, the capital structure decision of a firm should be examined from the point of its impact on the value of the firm. He further states that if capital structure decision can affect a firm’s value, then firms would like to have a capital structure which maximizes their value. The aim of a firm should centre therefore on the maximization of its value through capital structure decisions. However, there exist conflicting theories on the relationship between capital structure and firm’s value that it becomes necessary to capture them into some broad groups.


Ram Kumar kakani (2004) in their paper entitled about the “determinants of capital structure” attempted to find out the determinants of the capital structure and its maturity in India and they have analysed measures of short-term and long-term debt rather than an aggregate measures of total debt. They also analysed the empirical implications of liberalization of the Indian economy on the determinants of capital structure of the firm. For their finding they have used an econometric method. In this study they have used various indicators to arrive results, viz., collateral value of assets, capital intensity, Non-debt tax shields, growth rate of the company, unique size earnings risk, Net exports, Regulation, Corporate strategy and profitability. They have pointed out that diversification strategy and size were found to be of no significance in deciding the leverage level of the firm. Profitability was found to be negatively related to the capital structure of the firm. Capital intensity of the firm was also negatively related to the short-term debt and total debt ratio of the firms and also suggested that the regulated firms and growth-oriented firms had more total long-term debt in the capital structure.

The net exports of a firm seem to have grown its importance in determining the long-term and total debt ratio. Earnings volatility and non-debt tax shields were significantly negatively related to short-term, long-term and total debt of the firm. Uniqueness of the firm has become a significant factor, which is positively related in the determination of the short-term and total average of the firm. Thus, profitability, capital intensity and non-debt tax shields seem to be important determinants of capital structure of the firm.

Fakher et al. (2005) provided evidence to Capital structure with reference to the Libyan business environment. The dependent variable was

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62 Ram Kumar Kakarn: op.cit: P.69.
leverage ratio and the independent variables were size, tangibility, growth opportunities and profitability. The sample consisted of thirty two public companies and twenty three private companies. To test the relationship between the level of debt and their explanatory variables they used ordinary least square regressions. The result indicated that private companies tested to have a higher average growth rate and tangible assets than the public ones. The private companies had higher average debt ratios than the public companies. The tangibility and growth variables had a positive correlation with short term debt and a negative correlation with long-term debt. Profitability and size had a negative correlation with short term debt and total debt ratios. This implies that growing companies and companies with high levels of tangible assets tend to use short term debt rather than long-term debt and large and profitable companies tend to use less debt overall.

Mishra (2005) in his study on a sample of 41 profit making manufacturing PSUs, found that the capital structure (total Borrowing to total Asset) of the profit making PSUs is affected by asset structure (net fixed Assets to total Assets or NFATA), profitability (Return on Assets or ROA) and Tax. Unlike suggestion of pecking order hypothesis, growth (defined as growth in sales) is positively related to leverage. As predicated by theory. Net Fixed Assets to Total Assets and ROA are respectively positively and negatively related to leverage. In contradiction tax and leverage are negatively related. Firms with less effective tax rate have gone for more debt. None of the other variables like Non-debt tax Shield (NDTS), volatility and size was found to be significant.

Prashanth and Narayan (2005) analyzed the determinants of capital structure using a panel data for Indian manufacturing industries for a

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period from 2000 to 2004. The size of the firm was found to be the important factor in determining the leverage. The study also revealed that the size and profitability were found to be more important to young and small firms. An important observation here is that leverage decreases with an increase in the effective tax rate. Size and profitability were found to be more important to young and small firms whereas effective rate of taxation was found to be less important in determining capital structure.

As stated by Vasiliou, Eriotis and Daskalakis\(^{66}\) (2005), the most capital structure theories argue that a contributing factor of capital structure is the type of assets owned by a firm. This is because the cost of financial distress depends on the types of assets in the asset structure. The asset structure of a firm consists of tangible and intangible assets. Tangible assets are those assets that have a physical form and there are two subclasses: current assets (inventory, cash, and trade receivables) and non-current assets (machinery, plant, equipment, buildings).

Basu deb Guha (2005) examined the impact of financial liberalization on corporate investment behaviour in India. Equity as a source of funds has risen dramatically in the period immediately often the obligation of capital issues (CCI). However, investment in gross fixed assets does not match it at all expect for matured firms, which are more than 50 years old.

As remedial measures, recommended the tightening of corporate governance with the help of both “commerce and control” as well as market based policies by the government, the announcement of liberalizations have weighted heavily against the positive until now\(^{67}\).

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Drobetz et al. (2007) argue that even if these firms have to use external funds to finance investment opportunities, the value of the firm may remain unchanged because of the positive effects of future growth opportunities. This holds even under asymmetric information. However, a non-growth firm can only change its capital structure by swapping debt against equity, or vice versa. In the presence of asymmetric information, this swapping may result in negative signaling effects, which have a negative impact on the value of the firm.

Lakshmi Shyam Sunder, Stewart C. Myers (2006) in their paper entitled “Testing static trade off against pecking order models of capital structure” tried to find out the traditional capital structure models against the alternative of a pecking order model of corporate financing. The basic pecking order model, which predicts external debt financing driven by the internal financial deficit, has much greater time series explanatory powers than a static trade off model, which predicts that each firm adjusts gradually toward an optimal debt ratio.\(^68\)

ElKelish and Marshall\(^69\) (2007) have investigated the impact of financial structure on firm value in the United Arab Emirates emerging market. Financial statements of a stratified random sample of unlisted food firms are analyzed during the period 1996-2000. Empirical results show that debt to equity ratio has no impact on firm value. Furthermore, multiple regression analysis shows that business risk is the most important determinant of debt to equity ratio. It seems that the competitive capital market approach by Modigliani and Miller (1958) is favourable to the United Arab Emirates business environment. This may be due to the absence of any tax shield.

\(^{68}\) Lakshmi- Shyam-Sunder, Stewart C. Myers; “Testing static trade off against pecking order models of capital structure”; Journal of Economics 1999; P.219.

benefits of using debt and the low value of perceived bankruptcy and agency costs.

According to Eriotis et al.\textsuperscript{70} (2007), it is to the advantage of a firm to invest in liquid current assets, because that generates sufficient cash flows in order to be able to cover its current liabilities. Management, however, must maintain an optimal balance between current assets and current liabilities. If the liquidity is too high (current assets is much higher than current liabilities), it may signal to investors that the firm has a lot of funds tied up in non-productive assets such as excess cash, marketable securities or inventory. As noted earlier, this might pose a problem to the shareholders since those funds can be put to better use to maximise their wealth. So, liquidity ratio is likely to have negative relationship with firm value.

\textbf{Zietlow, Hankin and Seidner (2007)} have noted that debt is one of the important items in the capital structure of companies and it provides a medium for corporate financing as firms borrow money in order to obtain the capital they require for capital expenditure. It represents any agreement between a lender and a borrower: notes, certificates, bonds, debentures, mortgages and leases. They further have postulated that debt can either be short-term or long-term. Short-term debt represents funds needed to finance the daily operations of the firm, such as trade receivables, short-term loans and inventory financing. These types of funds' repayment schedules take place in less than one year. Long-term financing is usually acquired when firms purchase assets such as buildings, equipment or machinery. The scheduled repayments for these funds extend over periods longer than one year.

Zeitun and Tian\textsuperscript{71} (2007) investigated the effect which capital structure on corporate performance using a panel data sample representing 167 Jordanian companies during 1989-2003. They used Tobin’s Q ratio as proxy for market values of firms under study. Their results showed that a firm’s capital structure had a significantly negative impact on the firm’s performance measures, in both the accounting and market’s measures. They also found that the short-term debt to total assets (STDTA) level has a significantly positive effect on the market performance measure (Tobin’s Q).

Barclay and Smith Jr’s (2007) study provides strong support to the argument that a firm’s financial architecture is determined primarily the debt raised by growth firms also tends to have shorter maturity and higher priority than the debt issued by the mature firms. The said financing pattern is interpreted as the result of efforts to preserve financial flexibility and proper investment incentive in growth firms while providing strong managerial incentive for efficiency in mature firms\textsuperscript{72}.

Rafiq et.al.\textsuperscript{73} (2008) examined the chemical industry of Pakistan regarding capital structure choice and suggested that chemical sector preferred more equity financing than the debt financing. Size and growth variables showed static trade off behavior of the firm

Fan and So (2008) found that Hong Kong firms conformed more to the “pecking order” principle than a target long-term debt - equity mix in their financing, and investment decisions are made simultaneously. The firms within the same industry tend to have more similar capital structure, though it is not a deliberate choice of the management. Firm size is found to be a


\textsuperscript{72} Manoj Anand; op.cit; P.44.

determinant of capital structure. No evidence is found that managers took into consideration the proportion of intangible assets ever-total assets of a firm in making capital structure decisions\textsuperscript{74}.

\textbf{Graham and Harvey (2009)} survey found that earnings volatility tax advantage of interest on debt and credit rating are important determinants of debt for large firms and that are in fortune 500. They found little evidence that firms directly consider personal taxes when deciding on debt policy (rating of 0.68) 34\% of the respondents have tight target range of debt equity ratio, 10\% have strict and another 37\% have flexible target ratio. The investment grade firms (64\%) are more likely to have strict or tight target debt ratio than the speculative firms. Targets are important if the CEO has short tenure or is young\textsuperscript{75}.

\textbf{Akhtar and Oliver}\textsuperscript{76} (2009) have stated that the agency costs of debt increases when firms cannot collateralize their debt. In line with the pecking order theory which assumes there is no target capital structure and that instead of putting a target debt-equity ratio into place, firms adapt their financing policy to minimize associated costs. They further stated that firms can borrow at a lower interest rate if their debt is secured by assets with stable, long-term value. This implies that firms with less non-current assets generally have higher costs of borrowing due to the lack of collateralized assets. It is therefore expected that firms with a large amount of non-current assets will borrow more due to the fact that they can get debt at lower rates.

\textbf{Liu, et al.}\textsuperscript{77} (2009) identified the determinants of corporate financial structure for the IT (Information Technology) industry in China which is a promising service industry facing challenges and risk in the Global financial

\textsuperscript{74} Manoj Anand; op.cit; P45.
\textsuperscript{75} Manoj Anand; op.cit; P 30.
turmoil. In this paper, to analyze the determinants of the capital structure for a panel of 92 IT companies listed in the China stock exchange. Six traditional explanatory variables are adopted in the study, including size, profitability, tangibility, liquidity, 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. The sign of these relations suggest that both the pecking order theory and trade off hypothesis are at work in explaining the capital structure of IT companies.

Lima\textsuperscript{78} (2009) attempted to empirically analyze the factors determining the capital structure choice in the context of Bangladesh. He focused on agency cost, trade-off and pecking order model with variables like agency cost of equity, growth rate, operating leverage, bankruptcy risk, tangibility and debt service capacity using 17 pharmaceutical companies of Bangladeshi listed on Dhaka Stock Exchange Ltd as sample size. Multiple regression model has been used for analyzing pooled data considering agency cost of equity, growth rate, operating leverage, bankruptcy risk, tangibility and debt service capacity as the determinants and the Debt Ratio as the dependent variable. The results proved that all the six variables are statistically significant determinants of capital structure. Growth rate, operating leverage, tangibility and debt service capacity are positively related with the capital structure whereas agency cost of equity and bankruptcy risk shows negative relation.

Pathak\textsuperscript{79} (2009) examined the relative importance of six factors in the capital structure decisions of publicly traded Indian firms. The paper utilizes a


\textsuperscript{79} Pathak, Joy. (2009), What Determines Capital Structure of Listed Firms in India? Some Empirical Evidences from Indian Capital Market, City University of New York.
larger data set in comparison to the earlier studies on India and examines additional factors. The sample size of the studies over 135 firms in the period of 1990-2009 listed on the Bombay Stock Exchange. The objective of this paper was to build on previous studies on the Indian capital market and model all the important factors affecting capital structure decisions of Indian firms post liberalization policy by Government of India. The results of the study revealed that factors such as tangibility of assets, growth, firm size, business risk, liquidity, and profitability had significantly influenced the leverage structure chosen by firms in the Indian context.

According to Sibilkov\textsuperscript{80} (2009) equity enables the firm to obtain funds without incurring debt. This means that the funds obtained through equity do not have to be repaid at a particular time. The investors who purchase shares in the firm hope to reclaim their investment out of future profits. The shareholders have the privilege to share in the profits of the firm in the form of dividends or future capital gains. However, if the firm suffers a loss, the shareholders have limited liability, which means that the only loss they face is the amount that they had invested in the firm.

Bhaduri (2010) study of capital structure choice in developing countries through a case study of Indian corporate sector found that capital structure choice is influenced by factors such as growth, cash flow, size and product and industry characteristics\textsuperscript{81}.

Niranjan Swain, Mishra. C.S, Jayasimha. K.R, and Vijayalakshmi. S (2011) in their article entitled “shareholder wealth maximization in Indian pharmaceutical industry” examined how the market value added - a measure of external performance which is considered to be the best indicator of shareholder value creation is correlated of the company such

\textsuperscript{81} Manoj Anand; op.cit; P45.
as economic value added (EVA), Net operating profit after tax (NOP AT), Return on capital employed (ROCE), Return on net worth (RONW), Earning per share (EPS) on the one hand and the purely economic factors of the company such as labor productivity, capital productivity, total factor productivity sales and R & D expenditure on the other hand. A sample of 28 companies has been taken from pharmaceutical industry during the period ‘spanning 1992-93 and 2000-01. The study concludes that EVA, NOPAT and sales outperform other financial and economic measures in predicting MVA (Market Value Added) in most of the companies in Indian pharmaceutical industry.\(^8^2\)

Chowdhury and Chowdhury\(^\text{83}\) (2010) conducted a study to find out the impact of capital structure on the value of firm in the context of Bangladesh industrial sector. They used only secondary data of publicly listed companies traded in Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE) and included 77 companies from four different dominant sectors of Bangladesh capital market, i.e. pharmaceuticals and chemicals, fuel and power, food, and engineering industry. The data collected from balance sheet and income statements from January 1, 1994 to December 31, 2003. They found notable relationship between capital structure and firm value in Bangladesh.

According to Ezeoha and Francis\(^\text{84}\) (2010), larger and well-known firms have easier access to the capital market and the stock market than their smaller counterparts because the risk of default by a larger firm is much lower.

\(^8^2\) Niranjan Swain., Mishra C.S; Jayasimha K.R. and Vijayalakshmi 5; Shareholders wealth maximaization in Indian pharmaceutical industry: An econometric analysis”; The ICFAI journal of applied finance: vol8; No.6; Nov.2002; P.31.


than for a smaller firm. Further, larger firms have a better reputation in the debt market because they would generally receive higher credit ratings. Due to more security, financial institutions would be more willing to provide funds to larger firms and these funds are usually obtained at lower interest rates than by smaller firms. Small firms cannot access long-term debt markets since their growth opportunities usually exceed their amount of assets that can serve as collateral. Smaller firms have a higher risk of bankruptcy and will, therefore, borrow less. Therefore size is an important factor in determining the corporate financial structure.

Mazhar and Nasr \(^{85}\) (2010) attempted to examine the factors influencing the firm’s choice of a debt-equity ratio. They selected a sample of Pakistani companies registered on Islamabad Stock Exchange. The sample comprised 91 Pakistani companies out of which companies are private and Government owned covering the period of 1999-2006. Tangibility, Size, Growth rate, Tax provision, Return on Assets and Profitability are used as independent variables, while leverage is the dependent variable. For analysis purpose descriptive statistics, Spearman’s correlation and Regression analysis are used. The result implied that Government owned and private companies of Pakistan use different patterns of financing and that Government owned companies employ more leverage than private companies. Further, he concluded that variables like size do not matter in determination of capital structure of Pakistan companies. The results suggest that asset tangibility, profitability and ROA (Return on Assets) is negatively correlated with debt. Where size, Growth rate, and Tax rate is positively related with leverage.

Yang et al. \(^{86}\) (2010) proved that the greater is firm profitability, the more distributable earnings there are for shareholders, and thus the expected


firm value will be higher. ROA shows the management efficiency of the enterprise’s assets, and is also a positive measure of firm value. Based on this, we present the first hypothesis.

Adeyemi and Oboh\(^87\) (2011) examined the empirical effects of corporate capital structure (financial leverage) on the market value of a selection of firms listed on the Nigerian Stock Exchange. A sample size of 150 respondents and 90 firms were selected for the study. Chi-Square was used to draw inference of perceived relationship between capital structure and firm value. The results of the study showed the existence of a positive significant relationship between a firm’s choice of capital structure and its market value.

Afza and Hussain\(^88\) (2011) have undertaken a study to examine the industry specific attributes of firms in Automobile, Engineering, and Cable and Electrical Goods Sectors affecting the determinants of capital structure. The study uses pooled data regression model on the sample of 22 firms under Automobile, 7 firms under Cable and Electrical Goods and 8 firm under Engineering sectors to identify the determinants of capital structure. The debt to total assets ratio is used as a proxy for leverage and the impact of size, profitability, tangibility of assets, cost of debt, taxes, liquidity and non debt tax shield is analyzed on leverage. The empirical results reflects that firms of these three sectors with good liquidity position and large depreciation allowances use retained earnings, followed by debt financing for growth and smooth operations and equity financing is considered as a last resort.


Ali\textsuperscript{89} (2011) examined the determinants of leverage of Indian textile firms using panel data analysis. The sample of the study covers 170 Indian textile companies listed on the Bombay Stock Exchange covering the period from 2006 to 2010. Regression model was used for the analysis of panel data of sample companies. Firm Size, Growth in Total Assets, Non-Debt Tax Shields, Profitability and Asset Tangibility are used as explanatory variables, while leverage ratio is the dependent variable in the model. The results show that the variables of Size, Non-Debt Tax Shields, and Tangibility have high significant positive relationship with the leverage ratio, while on the contrary, growth and profitability have high significant negative relationship with debt ratio.

According to Chen and Chen\textsuperscript{90} (2011), the influences of profitability and leverage on firm value have long been critical with regard to financial decision making. The greater the profitability of a firm, the more assignable profit there is, and the higher is the value of the company. Profitability thus has a significantly positive influence on firm value. As highly profitable corporations are not over-dependent on external funds, profitability has a significantly negative influence on leverage. However, when the leverage increases, both agency and bankruptcy costs increase rapidly as a result. Since leverage generally has a markedly negative influence on firm value, leverage becomes the mediator variable in the influence of profitability on firm value.

Chen and Chen\textsuperscript{91} (2011) presented a paper on empirical evidence on the determinants of capital structure and firm value in a newly industrialized country. The firms’ characteristics were analyzed as determinants of capital


structure according to different explanatory theories. They performed analysis using a sample of 647 companies listed on the Taiwan Stock Exchange (TSE) from 2005 to 2009. They found that the firm size, profitability and capital structure affected the book value. The determinants of market value are profitability and firm size. In addition, there are some differences in the capital structure among industry types (different sectors). When the dependent variable is book value, firm size and growth opportunity have a greater impact on this in the electronic industry. Meanwhile, profitability and firm size have a greater impact on capital structure in non-electronic industries. When the dependent variable is market value, larger companies can borrow more debt and create more market value in the electronic industry. The capital structure negatively affects market value in electronic firms, but does not affect market value in non-electronic ones.

Raj\textsuperscript{92} (2011) made an attempt to examine the important determinants of capital structure decision of the select private sector manufacturing industries in India for the period 1991-92 to 2009-10. The investigation is conducted on a panel of 9 private sector manufacturing industries in India. The empirical results of this study justified our hypothesis. The econometric analysis shows that variables like profitability, size of the firm, cost of debt, debt service capacity and liquidity are the important determinants of capital structure of the select private sector manufacturing industries in India. The results indicate that most of the determinants of capital structure suggested by capital structure theories appear to be relevant for Indian firms. In this paper, Debt Equity Ratio has been used as the proxy for capital structure.

Sathya Sundaram (2012) in his article entitled “Pharmaceutical industry preparing for global competition” conducted a market survey in

accordance with pharmaceutical industry. The pharmaceutical industry is presently growing at a rate of seven to eight per cent per year.

But the problem doesn’t end here. The life saving drugs segment has been hit hard by idle capacities because of cheaper imports. Recoising the gravity of the situation, the Indian Government has recently allowed production of life easing drugs for diseases such as ADS and cancer at affordable prices after seeking help from the third party.

Top Indian pharmaceutical companies have out performed the multinational pharma giants. The average growth rate for the top eight Indian companies is 9.8 % as against the average growth rate for top multinationals (MNCs) at 6.9 %

Palanichamy and Shanmugasundaram (2012) found that the Indian pharmaceutical market continues to remain largely a generic market with the share of patented products being quite small. This is likely to be the case even after the introduction of product patent regime in 2005. However, the success in generic market will come to those who differentiate the products and deliver superior value.

The growth of generic companies will depend upon the growth rate of the pharmaceutical market, which in turn, will be driven by the rate of urbanization, pace of economic development, income level and per capita GDP.

The success of generic market will come to those who can differentiate the products and deliver superior value as compared to competitors. Quality can become a driver in future and the companies which have a global quality standard have an opportunity in the national and the world generic markets.

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93 Satya sundaram, I; “Pharmaceutical industry preparing for global competition”, Facts for you (business & Economic); Sep.2002; p.26

94 Palanichamy.P and Shanmugasundaram .G; “Fate of Indian pharmaceutical companies alter 2005” Facts for you; Sep.2003; PP. 18-49.
Antwi, Mills and Zharo\(^95\) (2012) have sought to provide evidence on the impact of capital structure on a firm’s value. The ordinary least squares method of regression was employed in carrying out this analysis. The result of the study reveals that in an emerging economy like Ghana, equity capital as a component of capital structure is relevant to the value of a firm, and Long-term-debt was also found to be the major determinant of a firm’s value. Following from the findings of this study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it’s impact is more on a firm’s value.

Maxwell and Kehinde\(^96\) (2012) have sought to provide evidence on the impact of capital structure on a firm’s value. The ordinary least squares method of regression was employed in carrying out the analysis. The result of the study revealed that in an emerging economy like Nigeria, equity capital as a component of capital structure is irrelevant to the value of a firm, while Long-term-debt was found to be the major determinant of a firm’s value. Following from the findings of this study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it results in a positive firm value.

Zarandi and Mozdabadi\(^97\) (2012) measured the effect of the market size and the ratio of book value on market value on excessive return. They used linear regression analysis to investigate the relationship between the excessive return and other factors and reported that there was a negative


relationship between size and excessive return and a positive relationship between the ratio of BV/MV and excessive return.

**Asle et al.** 98 (2013) investigated the relationship between Tobin’s Q and illiquidity in some selected firms in Tehran Stock Exchange. The proposed study selected non-financial stocks over the period of 2001-2010. The result of the survey indicated that there was a negative relationship between illiquidity and Tobin’s Q but the ratio was approximately seven percent.

**Hartono, et al.** 99 (2013) have undertaken a study with the aim of examining the effect of firm characteristics that proxies by size, firm age, profitability, leverage and firm growth on the governance quality which represented by IBCG Rating, and its impact on firm value. This research has two results, first, only firm size that affects the governance quality, and four other variables such as firm age, profitability, leverage and firm growth does not affect the corporate governance quality. The larger companies will encourage companies to implement better corporate governance, and better corporate governance quality will increase shareholder value. Second, corporate governance quality that measure with IBCG Rating, have an influence on firm value.

**Moghadas, Pouraghajan and Bazugir** 100 (2013) have studied the effects of various factors on firm value including capital structure, firm size, asset growth, etc. They gathered the necessary information from selected

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firms listed on Tehran Stock Exchange over the period 2006-2010. All firms maintained the same fiscal calendar and there were active during the period of study. The results indicated that there was a meaningful relationship between capital structure and firm value. In addition, there was a meaningful relationship between asset growth and increase on firm value. However, the study did not show any meaningful relationship between firms’ size as well as revenue growth and firms’ value.

As stated by Masidonda, et al. (2014), some theories explain the differences of capital structure for any company. As a result, it is important to review capital structure to increase firm value, especially manufacturing companies in Indonesian Stock Exchange (IDX), which is mostly labor intensive. They have undertaken a study with the purpose of analyzing the influence of CEO ability, profitability, NDTS, cash flow and CEO ownership on capital structure (LTDE and LTDA), and the impact of capital structure (LTDE and LTDA) on firm value. The study was conducted at manufacturing companies in IDX. Observation period are 2006-2010. CEO ability and CEO ownership determines capital structure (LTDE), while profitability and cash flow NDTS does not affect. Furthermore, CEO ability, profitability, NDTS and CEO ownership determines capital structure (LTDA), but cash flow does not affect. Capital structure (LTDE and LTDA) determines firm value.

Hasan et al. (2014) have studied the influence of capital structure on firm’s performance. This investigation has been performed on a sample of 36 Bangladeshi firms listed in Dhaka Stock Exchange during the period 2007–2012. They have used four performance measures; earnings per share (EPS),

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return on equity (ROE), return of asset (ROA) and Tobin’s Q; as dependent variables and three capital structure ratios; short-term debt, long-term debt and total debt ratios; as independent variables. Using pooling panel data regression method, we found that EPS has significant positive relationship with short-term debt while significant negative relation with long-term debt. There is significant negative relationship between ROA and capital structure. On the other hand, there is no statistically significant relation exists between capital structure and firm’s performance as measured by ROE and Tobin’s Q.

Hoque, Hossain and Hossain\textsuperscript{103} (2014) have studied capital structure policy and its impacts on value of the firm. The outcome of this study was both the primary and secondary data. The study was based on opinions survey of 80 respondents of the 20 manufacturing corporate firms, enlisted under Dhaka Stock Exchange. The empirical analysis of the study was limited to a period of five years ranging 2008-2012. This study has portrayed that the independent variables namely capital structure, debt to equity, debt to asset, fixed assets to total assets (Tangibility), earnings before interest and taxes to interest charges, financial leverage multiplier have influenced value of the firm to the extent of 79.1 percent significantly.

Kodongo, Mokoaleli-Mokoteli and Maina\textsuperscript{104} (2014) have investigated the relationship between leverage and the financial performance of listed firm in Kenya using annual data for the period 2002 – 2011. They used Tobin’s Q as proxy for firm value and found that leverage has no effect on Tobin’s Q, our proxy for firm value. As the performance of firms depends on other things than just their capital structure, other variables are included as control


variables in the models. In this respect, they have found that asset tangibility, sales growth and firm size are important determinants of profitability. Surprisingly, asset tangibility consistently has a negative relationship with profitability. For small firms, sales growth and firm size are found to be important factors driving firm value (Tobin’s Q). Yet, the same variables do not appear to drive the value of large firms.

According to Mahmudi and Mohammadi (2015), firm, when making financing decisions, perform a risk assessment of all financial instruments and choose those which maximize dividends and return on equities. The use of debt instruments are of interest to financial decision-makers given their tax savings and lower costs compared with capital securities. With the above in mind, they have carried out a study with the aim of exploring the relationship between the capital structure and the performance of the firms listed in the Tehran Stock Exchange with a sample of 150 firms selected from food and drink production, auto manufacturing and car parts, machineries, and equipment industries for 6-year period from 2007 to 2012. The relationship between the ratio of debt, short-term debt, long-term debt as capital structure variables and corporate performance indices such as return on equities, return on investments and dividends per share was explored using the fitness of multivariate regression models. The results have shown that financing through short-term and long-term debts has a negative impact on corporate performance. However, these results were different among various industries under study.

2.3 CHAPTER SUMMARY

The detailed review of literature clearly states that most of the reviews mentioned in this chapter have focused only on limited industries. But

literature review has helped the researcher in understanding the various determinants of capital structure, impact of capital structure on firm values, and other factors contributing to firm value. The review of the above studies enabled the researcher to find out research gaps that there is no single research work on corporate financial structure and its determinants along with analyzing determinants of firm value as well as identifying the relationship between capital structure and firm value. Hence the present study is focused on to fill this gap.