CHAPTER 3

LITERATURE REVIEW

This chapter starts its journey with a purpose to give a better understanding of the research work done by various researchers in the past about the capital structure.

The argument for the topic capital structure started with the first study done by Modigliani and Miller in 1960’s. In the study there were various assumptions like that of perfect market with no transaction costs, no bankruptcy costs, no asymmetric information, no agency difficulties and most important is that taxation policy was not considered. Basis of such assumptions it was anticipated that the value of the firm is independent and any proportion of debt and equity in the capital structure of the firm have no effect on its value. According to him financing decisions and investment decisions are completely separated from each other. In 1963 when the taxes were present and interest payments were considered as tax deductibility, and under the assumption that the debt is default-free then under such a situation debt was considered as the only source of finance. Afterwards other researchers also followed the same.

Jenson and Meckling (1976) in his paper “Theory of the firm: Managerial behavior, agency costs and ownership structure”\(^1\) acknowledged that firstly debt holders and equity holders had controversy among them and secondly manager’s and shareholders had controversy among them. According to the agency cost hypothesis it was proposed that the managers are only concerned in maximizing

their own benefit rather than in maximizing the wealth of the shareholders. Thus the interest of the shareholders was opposed by keeping an eye on them or by taking control actions which also increased the cost.

Baxter(1967) in his paper “Leverage, Risk of Ruin and the Cost of Capital”\textsuperscript{1} has discussed about the excessive gearing which is expected to increase the cost of capital, starting from the point where the debt’s tax advantages becomes smaller than the increased indirect plus direct cost of debt. He also says that the high degree of gearing increases the probability of bankruptcy and thus the risk of the overall earnings stream increases. In his study he discussed about the cases of the three companies bankruptcy that had filed for receivership. He investigated from the sales data of all the three companies and they showed that on immediately filing of the reorganization petition, the companies had showed the dramatic decline in their sales. In other words he expressed his views that due to an administrative cost and often costs in form of reduction of net operating earnings the companies have to face the situation of bankruptcy. Therefore, excessive leverage which can trigger bankruptcy may indeed raise the cost of capital to a firm and reduce the total value of the firm.

He concluded that the at the point when the tax advantages of gearing are equal to the cost or debt and expected financial distress costs, the firm should not borrow beyond that situation, as it gives rise to the maximum value of the capital structure.

Schwartz and Aronson (1967) in his paper “Some surrogate evidence in support of the concept of optimal financial structure”1 proved that as the time changes the financial structure of the firms also changes. They used the statistical tools such as F-ratio or variance ratio test to show that financial structure varies among industries. F-ratio (one way analysis of variance, tests the null hypothesis that the difference among the population means of the various industrial classes sampled is Zero) on common equity to total assets shows that the financial structure is homogeneous is an industry.

Scott (1972) in his paper “evidence on the importance of financial structure”2 analyzed the existence of an optimum range of financial leverage in a particular industry through a sample of 77 corporations which were taken from 12 different industries using one-way analysis of variance. It considers that there exists the homogeneous capital structure in an industry. In his study the implication is that firms behave as if there exists an industry – related optimal or target capital structure. Its result was similar to that of Schwartz and Aronson (1967).

DeAngelo and Masulis (1980) in his paper “Optimal Capital Structure under Corporate and Personal Taxation”3 discussed Miller’s differential tax model by including other non-debt tax shields such as depreciation charges and investment tax credits using the cross sectional and time series predictions. They mentioned that the introduction of such non-debt tax shields leads to the conclusion that each

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firm has an unique interior optimal capital structure that maximizes its value. This capital structure is determined only by the interactions of personal and corporate taxes as well as positive default (financial distress) costs.

Bowen, Daley and Huber (1982) in their research "Evidence on the Existence and Determinants of Inter-Industry Differences in Leverage"\(^1\) took 4 digit standard industry codes to study eighteen hundred firms in nine industries. Their proxies for the capital structure were long-term debt plus short-term debt to total assets ratio and the common equity to total assets ratio. They came with the conclusion that the firms in each industry have similar capital structure by using the F-ratio analysis ; and further arrive at the conclusion that the firm’s relative ranking to mean industry financial structure across time is stable with the help of the Spearman rank coefficient analysis. Finally, they also concluded that the gearing of firms within an industry tends to converge to the industry’s average by using the Fisher exact probability test. The firms investigated in this study, therefore, aimed for a target capital structure.

Marsh (1982) developed a descriptive model of the choice between long term debt and equity financing based on both the theory and empirical evidence in his research “The Choice between Equity and Debt: An Empirical Study”\(^2\). They believed that the companies who require new finance issue debt, if they are below target debt level and equity, if they are above target debt level. He took the

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sample of 748 UK companied regarding debt and equity issues. He took the period ranging from 1959-1970. He used logit analysis to test his model.

First, he summarized that the decision between financing of investment either by debt or equity is subjected to the condition of the market the prices of the security in the past. Indeed, these factors appear to be far more significant in his model than, for example, other variables such as a company's existing capital structure. Second, this study provided evidence that choice of financing between the ratio of long term debt to total debt or short term debt to the total debt is due to the target levels set in the mind of the companies. At last he summarized that the results are reliable with the view that these target levels are themselves functions of company size, bankruptcy risk, and asset composition.

Castanias (1983), in his research “Bankruptcy Risk and Optimal Capital Structure” discussed whether there is or there is not a negative relationship between observed gearing and historical failure rates across lines of business. He examined the relative stationary level of failure rates over time for 21 lines of business for 1940, 1950, 1960, 1970, and for 1972 through 1977. The author concluded that firms in lines of business that "tend" to have high failure rates also tend to have less debt in their capital structures. The empirical results are not consistent with the capital structure irrelevance model of Miller.

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Myers and Majluf (1984) in their paper “corporate financing and investment decisions when firms have information that investors do not have”\(^1\) and Myers (1984) in his paper “The capital Structure Puzzle”\(^2\) made a valuable addition in capital structure literature by providing Pecking Order and Static Trade-off Hypothesis respectively. They used the cross sectional financial analysis to prove their objective. In their research paper they discussed that as pecking order theory the hierarchy should be used for financing the investment of the firm i.e. if the amount is required for investment then the first preference should be given to the retained earnings, second preference should be given to the issue of debt and if still more finances are required then the firm should issue the equity shares. On the other hand according to the trade off model the firm should have the best possible mix of debt and equity in the capital structure which can balance between the benefits of the tax shield and the cost of debt. Thus the debt equity mix should be according to the requirement of the business.

Altman (1984) in his paper "A Further Empirical Investigation of the Bankruptcy Cost Question"\(^3\) studied about the firms which were bankrupt. He took twelve retail and seven industrial firms for his study. The period for which the study was done range from 1970 to 1978. He divided the cost of financial distress into direct and indirect costs. He defined direct costs as lawyers', courts', accounts' and other


administrative costs which can be directly measured; and indirect costs as lost sales, reduced managerial energies and higher costs of funds, which can only be estimated. In his study, Altman evaluated the effect of direct and indirect costs. He concluded that bankruptcy cost were not trivial. In many cases they exceeded 20% of the value of the firm measured just prior to bankruptcy and even in some cases measured several years prior. This suggested that capital structure should be set at a point where the marginal present value of tax benefits equals the marginal present value of financial distress costs.

Bradley, Jarrell and Kim (1984) in his research “On the Existence of Capital Structure: Theory and Evidence” developed a model that synthesizes the modern trade-off theory of optimal capital structure. While doing the research, the authors came to the conclusion that there exists a strong direct relationship between the firm’s debt level and non-debt tax shields. They also concluded that the volatility of a firm’s earnings had a negative relationship with gearing.

DeAngelo’s and Masulis’ work was extended by Dammon and Senbet (1988) in his paper “The Effect of Taxes and Depreciation on Corporate Investment and Financial Leverage” by scrutinising the firm’s investment decision. They did not agreed on the point that debt and investment tax shields in the case of optimal investments by the firm are related to each other. Dammon and Senbet discussed that firms are not forced to reduce their debt level if an increase in investments-


related non–debt tax shields are owing to the changes in the tax code. They hypothesized that, in cross sectional analysis, the fact that firms with higher investment tax shields do not necessarily have lower debt tax shields, unless all the firms use the same technologies, may explain the deviation from DeAngelo and Masulis’ results.

Emery and Gehr (1988) in his valuable research “Tax Options, Capital Structure and Miller Equilibrium” discussed that there are many instruments other than equity which reduces the firm’s tax expense. It is stated by the ratio of tax suffered by the firm and its investors to the firm’s pre-tax cash flows. In aggregate this increases the value of the firm’s tax options. Therefore, one can say that every firm by using multiple securities can capture some of the value. There are many combinations with each firm such as bonds, preferred stock, common stock and warrants that makes up its optimal capital structure. It can be concluded that every firm has an option to increase its value by incorporating instruments in its capital structure with returns that are not perfectly correlated with those of its existing securities.

Ashton (1989) in his research “Textbook Formulae and UK Taxation: Modigliani and Miller Revisited” reworked the MM (1958, 1963) and Miller (1977) arguments to fit capital structure with in the U.K. tax system at the time. He discussed that if there is a U.K. tax advantage of debt, and then the traditional MM value is likely to be much greater than the U.K. tax advantage of debt. He

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also said that tax advantage of debt is likely to be no more than 13% of the value of the permanent debt. In U.S. classical system the tax advantage of debt is considerably more than that of U.K. imputation system. This reduced tax advantage to debt arises because under an imputation system, the withholding tax on the gross dividend can both be offset against the firm’s corporation tax ability and treated as a tax credit by the shareholder, thus reducing both corporate tax ($T_c$) and personal tax on equity ($T_{pe}$). The smaller tax advantages of debt in the U.K. would predict, in general, lower levels of debt in the U.K. than in the U.S.

Harris and Rajiv (1991) was also the important researcher whose research work on ‘the theory of capital structure’ revolves around powerful forces after financial policy and capital structure. They construct categorization based on the variables such as agency cost, insolvency, taxes, communication with the input/product and corporate control consideration. Sanders (1998) also studied the same theory as Harris and Rajiv (1991) study in their research paper but using the different approach. He categorized the capital structure theories established on if the specific theory assumes the existence of most favorable financial policy and how it was explained by the theory. As per his research work there are three types of theories. Firstly, the irrelevance theory related to the firm’s value explained by Modigliani and Miller. Secondly, the pecking order theory which discussed about the optimal financial hierarchy and thirdly according to the trade-off theory which supports the presence of best possible debt equity mix. According to the study the mixture of long term debt and equity is considered as the capital structure.
Givoly, Hayn, Ofer and Sarig (1992) in his research paper “Taxes and Capital Structure: Evidence from Firm's Response to the Tax Reform Act of 1986”\(^1\) evaluated the response of firms to the U. S. 1986 Tax Reform Act. The results of that study support the tax-based theories of capital structure. Also, they found that there exists a substitution effect between debt and non-debt tax shields and that both personal and corporate tax rates affect capital structure.

Hatfield, Cheng and Davidson, (1994) in his paper “The determination of optimal capital structure: The effect of firm and industry debt ratios on market value,”\(^2\) came up with the same decision that influence on the firm’s value should be observed while taking the decision of the capital structure of the firm. The study says that every firm is interested to have the mixture of debt and equity in their capital structure which will maximize the value of the firm. Thus every firm should have the target of maximizing its firm’s value via decisions of capital structure. However, the conflict between the capital structure and value of the firm stay alive.

Kwansa (1995) in his study of "Bankruptcy Cost and Capital Structure: The significance of Indirect Cost"\(^3\) studied 10 restaurant firms that went bankrupt

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between 1980 and 1992 investigates the size of the indirect costs to firms that file for bankruptcy, to determine if this cost is substantial. Additionally, he investigates the trade-off between tax savings and indirect bankruptcy costs for its usefulness in signaling potential firm insolvency. One of the findings indicates that the indirect cost of bankruptcy is substantial in absolute terms. With regards to its significance as a proportion of firm value, the findings confirm the fact that the foregone profits represent a sizeable proportion of the firm's value. The other finding was that generally the size of the indirect bankruptcy costs outweighs the size of the tax savings from debt use, the closer the firm is to filing for bankruptcy.

Kakani, R. K. (1999) studied the determinant of capital structure in developing countries such as India using top 400 firms listed on Bombay stock exchange in the year 1985 and having existence till the financial year 1995 which did not had negative values for total assets or average operating income during the period of study. They analyzed measures of short term and long term debt rather than studying only an aggregate measures of total debt using the independent variables such as collateral value of assets, capital intensity, Non-Debt tax shields, growth rate, uniqueness, size, earnings volatility, net exports, regulation, corporate strategy and profitability. The study found that the leverage level of the firm is not influenced by diversification strategy and the firm’s size. The most important factors in deciding the capital structure were profitability and capital intensity as they both are negatively related to the capital structure of the firm. The result also found that regulated firms and growth oriented firms had more total and long term debt in their capital structure during the year 1984 till 1989. Earnings volatility

and non-debt tax shields were significantly negatively related to short term and total debt of the firm. In determining the short term and total leverage of the firm uniqueness of the firm had become a significant factor.

Dević, A., & Krstić, B. D. (2001) in their research study “Comparative analysts of the capital structure determinants in polish and Hungarian enterprises: Empirical study”\(^1\) analyzed 20 Hungarian firms and 18 Polish firms, excluding firms from finance sector using regression and correlation models. Tangibility, size, profitability and growth opportunities were taken independent variables for the study. The result showed that size was considered as the most important determinant of corporate financing patterns in Poland. If while calculating the leverage book value is used then profitability is also considered significant. Thus, inverse relationship between leverage and profitability supports the pecking order theory whereas positive relationship between size and leverage supports the trade-off theory of capital structure. The result for Hungarian firms showed that profitability is the most significant in explaining the leverage. The inverse relationship was found between the profitability and leverage which supports the pecking order theory of the capital structure. On the other hand tangibility showed the positive relationship with the total debt ratio which favored the trade off theory of the capital structure. In Hungarian firms the profitability and tangibility were found to be significant only when market value of equity were used. Thus, it was concluded that in case of Hungarian firms market values are more relevant than book values and in Polish firms book values are more relevant than market values.

Chen, J. J. (2004) in his research paper, “Determinants of capital structure of Chinese-listed companies,” studied the determinants of capital structure of 77 Chinese non financial public listed companies for the period ranging from 1995 till 2000 as the financial public listed companies (banks, insurance companies and investments trusts) have a strikingly different structure from those of non financial companies. The study analyzed the overall leverage and long term leverage as the dependent variables and profitability, size, growth opportunities, asset structure, cost of financial distress and tax shields effects as the independent variables using correlation and regression analysis as the statistical tools. The evidence from the study suggested that coefficients of growth opportunities and profitability are significant for the total leverage where as coefficient of profitability, growth opportunities, tangibility and size are significant for the long term leverage. The study showed the negative relationship of profitability and firm’s size with debt. On the other hand it showed the positive relationship of growth opportunity and tangibility with debt. The result shows that Chinese firms prefer short term finance and considerably lower amounts of long term debts. The Chinese firms follow a “new Pecking order” which means the funds will be raised in the following sequence - retained profit, then equity and lastly debt because it is not obligatory to pay to equity share holders.

Harvey, Lins and Roper (2004) examine if effect of information problems and the effects of agency can be diminished by debts. The researchers emphasize on upcoming firms in the market for which ownership structure like pyramid is likely to create acute agency costs. They account the additional advantage of debt is

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determined in firms with high predictable managerial agency costs and problem of excess investment resulting from high level of assets in place or the future growth opportunities are restricted. The researchers advise that the organization term loans are mainly useful at generating the firm’s value. Their results encourage the hypothesis that mainly at the time of over investment in the firms, the equity holders value is compliance with monitored covenants.

Keshar J. Baral (2004) in his paper, “Determinants of capital structure: A case study of listed companies of Nepal.”¹ studied the determinants of capital structure having variables such as business risk, growth rate, dividend payout, size, earning rate, dividend payout, debt service capacity, and degree of operating leverage. His sample consist of the companies including manufacturing companies, commercial banks, insurance companies, and finance companies which are listed to Nepal Stock Exchange Ltd. He collected the data for the particular date i.e as on 16th July, 2003. The methodology used to see the influence of explanatory variables on the capital structure is the multiple regression models. The study resulted that there is a significant relationship with size, growth rate and earning rate.

Beattie, V. and Goodacre, A. and Thomson, S. J. (2006) says, “ all current theories of capital structure contribute to decision-making practice though certain aspects of the theories are strongly proved false. Importantly, finance directors’ opinions are not fully consistent with either of the main theories. There are several possible reasons for this. Clearly, the capital structure decision is a complex, multi-

dimensional problem”. Moreover, financing decisions are likely to be the product of complex group processes. Capital structure theory is not (yet) able to capture these complexities. Although dynamic regression models are beginning to recognize that relationships might vary over time, models that incorporate elements of both *trade-off theory* and *pecking order theory* might be a fruitful line of enquiry.

The study also suggests that attention should be given to seeking a better understanding of the diversity and complexity of firms’ capital structure decisions rather than simply describing the associations between capital structure outcomes and firm-specific characteristics for the ‘average firm’. In view of our finding that managers do not believe the market to be efficient, future research might also usefully consider alternative decision models which are less founded on rational economics. In-depth case study observations of individual firms’ financing decisions and particularly of changes over time would be especially valuable in exploring this diversity and related behavioral effects.

Dushnitsky, G., & Lenox, M. J. (2006) in his paper, “When does corporate venture capital investment create firm value.” analyzed the condition when corporate venture capital creates firm value through the survey of 1173 firms during the period 1990 to 1999 using Tobin’s q methodology. Annual corporate venture capital (CVC) investment, R & D expenditure, Capital expenditure,

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growth, leverage, firm size, industry q were taken as variables. The study shows that those firms which are growing and make larger capital expenditures have higher Tobin’s q. Leverage and firm size have a negative impact on Tobin’s q. It was also found that the investments in entrepreneurial ventures by established firms have a positive impact. Thus, it was concluded that the firms who make CVC investment are superior and create more firm’s value to the firms which do not invest.

Salawu, R. O., & Ile-Ife, N. (2007)\textsuperscript{1} analyzed the capital structure of the Nigerian companies using the data of 50 non financial firms from the period ranging from 1990 till 2004 using the static tests model. The study was done with the help of independent variables such as profitability, tangibility, collateral, growth and firm’s size. The result showed that profitability was negatively correlated with profitability where as tangibility was positively correlated with total debts and long term debts but negatively related to short term debts. On the other hand short term or long term bank borrowings in Nigeria were influenced by collateral. Growth was positively related to both total debts and short term debts. The size of the firms is also positively related with total debts and short term debts. Finally the study showed that debt financing of the Nigerian firms mainly corresponds to a short term debts.

Yuanxin Liu & Jing Ren, Yan Zhuang (2009) in their paper, “An empirical analysis on the capital structure of Chinese listed IT companies.”1 analyzed 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, such as size, profitability, tangibility, liquidity, profit growth rate and growth opportunity were taken. Linear regressions were used to study the effects of the factors. It was found that the size of companies was positively related to leverage, while growth and profitability, liquidity, profit growth rate and growth opportunity were negatively associated with leverage.

Huson Joher Ali Ahmed, Nazrul Hisham (2009)2, studied the capital structure theory and test Pecking Order Hypothesis and Static Order Trade-off theory of the listed firms of Malaysia. The period of study ranges for four years ie from 1999 to 2002. As proved earlier the pecking order theory gives emphasis on the internal financing than the external financing. Thus, if the internal financing is not strong then only the Malaysian companies have to issue debt in the capital market despite the lower predicting power. On the other hand Malaysian capital market fails to explain the issuance of new debt issue. The study also discussed that tax shield benefit is not considered by the Malaysian firms. To neutralize the size effect the firm’s size was used. No evidence of static-order-trade-off was observed in asset structure and growth in capital market of Malaysia.


Črnigoj, M., & Mramor, D. (2009) in their paper, “Determinants of capital structure in emerging European economies: evidence from Slovenian firms.” analyzed Ownership and capital structure in Latin America in 3214 firms in 1999 to 4280 firms in 2006 using Cross sectional analysis of non financial Slovenian firms. Tangibility of assets, earnings volatility, firms size, profitability, employees power in corporate governance and amount of equity capital per employee were the various variables that were used for the study. The study found the negative correlation between leverage and tangibility of assets, earnings volatility, profitability, the extent to which a firm is characterized by employee-governed behavior and equity capital per employee. But on the other hand it also shows the positive correlation between leverage, firms size and growth rate. Thus it was concluded that in the emerging European economies the shareholders were probably gaining slow control in firms. so, the financial behavior of Slovenian firms most probably remains different from those in mature market economies.

Uadiale O.M (2010), research paper is based from the data collected in Nigeria. They studied the impact of board structure on corporate financial performance. It examined the structure of boards of directors in Nigerian firms and analyses whether board structure had an impact on financial performance, as measured by return on equity and return on capital employed. To test the relationship between the independent variables and the dependent variable (corporate performance),

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they used the Ordinary Least Squares regression model. Their study resulted in a strong positive relationship between board size and corporate financial performance. The fact also reveals that there was a positive relationship between outside directors sitting on the board and corporate financial performance. On the other hand, the inverse relationship was observed between directors’ stockholding and firm financial performance measures and between ROE and CEO duality.

Margaritis, D., & Psillaki, M. (2010), analyzed the relationship between ownership structure, firm performance and the firm’s capital structure by studying the French manufacturing firms as a sample. The firm’s performance was measured by the productive efficiency using non-parametric Data Envelopment Analysis. To study the effect of efficiency on leverage they choose quantile regression model. They focused on the concept that whether more debt or less debt is the part of the capital structure of the more efficient firms. The variables taken for the study were firm performance, agency cost, profitability, asset structure, intangibles and firm size. The results were similar to that of Jensen and Meckling (1976). He also concluded that if the firms have improved efficiency then they have higher leverage. He further found that industries like computers and textiles had no significant relationship between firm performance and ownership structure. Their research also concluded that in textiles industry more dispersed ownership structures are generally associated with less debt in the capital structure except for highly leveraged firms.

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Welch, I. (2010), discuss, “two common problem in capital structure research. First whether debt should be considered or equity should be considered. He also explained that increases in FD/AT decreases in non-financial liabilities. Second, equity issuing activity should not be viewed as equivalent to capital structure changes. Empirically, the correlation between the two is weak”.¹

Céspedes et al. (2010) discuss, “capital structure and its relationship among seven Latin American countries. His period of study was from 1996 till 2005. The sample taken for the study was of 6766 firm-years. They concluded that there is a positive relationship between leverage and ownership concentration. Also, the research results indicate a positive relationship between leverage and growth variable, and a negative relationship between leverage and profitability and larger firms have more tangible assets”².

Ahmed, N., Ahmed, Z., & Ahmed, I. (2010) study, “Determinants of capital structure: a case of life insurance sector of Pakistan.”³ Revolves around the Pakistanis life insurance companies. They studied the determinants of capital structure over the period of seven years from 2001 to 2007. The variables taken for the study are profitability, size, risk and liquidity. Their result shows that there

exists the inverse relationship with age, liquidity and profitability following the pecking order theory. It also shows the results favoring the trade off model which shows the positive relationship between leverage and size. The results also indicate that leverage has statistically insignificant relationship with growth and tangibility of assets.

A. Shahjahanpour, H. Ghalambor, A. Aflatoon (2010) in their research, “The determinants of capital structure choice in the Iranian companies”¹ studied two major competing theories in the capital structure literature, and compares the applicability of these two theories in the selected data set of two consecutive financial years (2007 and 2008) of Tehran stock exchange listed corporations. Results are based on a correlation test and a multiple regression of the developed hypotheses, and show that Iranian capital structure decisions are more likely to the content of the pecking order theory. Because 60% of the accepted items are consistent with the pecking order theory, and the 40% reminders are consistent with the traditional static trade off theory.

Yu-Shu Cheng, Yi-Pei Liu and Chu-Yang Chien (2010) in their paper “Capital structure and firm value in China: A panel threshold regression analysis”² examined if there was any most favorable mix of debt and equity which can maximize the firm’s value. The sample size taken for the study was 650 A shares.


of Chinese listed firms and the time period for which the study was done range from 2001 to 2006. To test the effect of debt ratio on the value of the firm an advanced panel threshold regression model is applied. The study describe that an inverted \( -U \) correlation between firm’s value and leverage and a triple threshold effect does exist. The study also reveals that there is a particular point beyond which if the investment is financed by the issue of more debts then there will be no improvement in the comparative value of the firm. The main goal of the financial management is to maximize the shareholders wealth.

According to Ehrhardt and Brigham (2003), the worth of company based on the going concern prospects is the present value of all the expected future cash flows to be generated by the assets, discounted at the company’s weighted average cost of capital (WACC). From this it can be seen that the WACC has a direct impact on the value of a business. (Johannes and Dhanraj, 2007).

B.Prahalathan (2010)\(^1\), studied the relationship between capital structure determinants and leverage level of 19 manufacturing companies listed in Sri Lanka. In his study, dependent variable that is, leverage level of the companies, is measured by long-term debt ratio, short term debt ratio and total debt ratio. Capital structure determinants (independent variables) are measured by capital intensity, tangibility, profitability, firm size and non-debt tax shield. Findings showed that the direction of the explanatory variables such as, tangibility, profitability, firm size and non-debt tax shields with total debt largely consistent with the explanations of trade-off theory.

Karadeniz, E., Kandır, S. Y., Iskenderoglu, O., & Onal, Y. B. (2011) investigated the role of firm size on capital structure decisions of unquoted Turkish lodging companies. Furthermore, validity of trade-off and pecking order theories in explaining the capital structures of the lodging companies were examined. A survey of 619 lodging companies was taken. They suggested that there was a statistically significant relationship between firm size and using incentives in financing setup investments. Furthermore, they detected a statistically significant relationship between firm size and common stock issues. Likewise, they observed a significant linkage between firm size and personal debt. However, financing preferences for setup investments, ongoing operations and future investments seem to be independent from firm size. Moreover, there was a hierarchical preference for internal sources, debt and common stock issues. Other findings were also related with the validity of pecking order theory in explaining the capital structures of Turkish lodging companies. They discovered that Turkish lodging companies seem to prefer equity and long-term debt in a sequence.

Chandra Sekhar Mishra (2011) discusses, “Sample of 48 profit making manufacturing PSUs for the time period 2006 to 2010 were taken. Multiple regressions have been used to find out the factors affecting capital structure. The independent variables have been considered keeping in view Agency Theory, Pecking Order Hypothesis and other established capital structure models. The results suggest that the capital structure (Total Borrowing to Total Assets) of the profit making PSUs is affected by Asset Structure (Net Fixed Assets to Total

Assets, NFATA), Profitability (Return on Assets, ROA) and Tax. Unlike suggestion of pecking order hypothesis, growth (defined as growth in total assets) is positively related to leverage. As predicted by theory NFATA and ROA are respectively positively and negatively related to leverage. In contradiction to theory 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, Size were found to be significant”.

Afrasiabi, J., & Ahadinia, H. (2011) in his research paper analyzed how financing effect on capital structure, through all listed companies in Tehran Stock Exchange from 2006 to 2009 with the help of t-test, Flevence, Ks test, Pearson’s correlation coefficient test and Spearman’s rand correlation coefficient test. The variables taken for the study were financing through debt instruments and financing through equity issuance. The study found the similar results of Miller and Modigliani (1958). It analyzed that the method of financing does not have any effect on the value of the firm. His study also found that the companies which are financed by issuing stock have less systematic risk than those companies who are financed through debt. Further, his study also proved that the companies which have financed through stock have got less risk and have attained higher return.

Mahabuba Lima says about, “Factors determining the capital structure choice and the conformity of these factors with the predictions drawn by the competing capital structure theories in the context of Bangladesh. Multiple regression model

is used for the pooled data of listed pharmaceutical companies in Bangladesh considering agency cost of equity, growth rate, operating leverage, bankruptcy risk, tangibility and debt service capacity as the determinants and the Debt Ratio (DR) as the dependent variable. The result shows that Growth rate, operating leverage, tangibility and debt service capacity were positively related with the capital structure whereas agency cost of equity and bankruptcy risk show negative relation. This analysis finds that agency cost theory and static trade-off theory help described the capital structure pattern of the pharmaceutical companies in Bangladesh.”

Ivo welch (2011), suggested that there were two common problems in capital structure research. First, although it was not clear whether non-financial liabilities should be considered debt, they should never be considered as equity. Yet, the common financial-debt-to-asset ratio (FD/AT) measures of leverage committed that mistake. Thus, research on increases in FD/AT explained, at least in part, decreased in non-financial liabilities. The paper also quantified the components of the balance sheet of large publicly traded corporations and discussed the role of cash in measuring leverage ratios. Second, equity-issuing activity should not be viewed as equivalent to capital structure changes. Empirically, the correlation between the two was weak.

1 Mahabuba Lima, An Insight into the Capital Structure Determinants of the Pharmaceutical Companies in Bangladesh, www.google.com

Al-Qudah, A. M. A. (2011)\(^1\) analyzed the Determinants of Capital Structure of Jordanian Mining and extraction Industries through 11 firms listed in Amman stock exchange for the period between 2005-2008 with the help of Regression analysis using cross section and time series data. The variables taken for the study were profitability, firm size, tangibility, non-debt tax shield and growth of the firm. The study shows that profitability has a negative and substantial impact on the leverage but tangibility and expected growth shows the mixed impact (positive on long term debt, negative on short term debt and positive on total debt ratio) on leverage. Size shows the positive and highly significant impact on leverage. Finally, it was concluded that Jordanian firms likely to have lower long-term debt.

Ghosh, A., & Cai, F. (2011) in his study of, “optimum capital structure Vs pecking order theory”\(^2\) analysed 500 United States companies from the year 1983 to 2001. They used non parametric Fisher Exact Probability test and Goodman-Kruskal Gamma measures to analyze their data. Their result shows that if the firm’s mean is above the industry mean then in such case the firm will adjust their capital structure. On the other hand if the firms mean is below the industry mean then there is very less chance that the firms will adjust their capital structure. They also showed that the firms prefer internal sources of finance than the external sources of finance. In case, if external financing is required then the firms will prefer debt over equity. Thus, their study emphasized that both optimal

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capital structure and the pecking order theory coexist and they are not mutually exclusive in nature. With this result they also mentioned that pecking order hypothesis is more prominent than optimal capital structure because pecking order theory was significant for all the industries in all the mentioned years where as optimal capital structure was significant only in some major industries and in some major years covered by their study.

Abu-Rub, N. (2012)\textsuperscript{1} in his study impact of capital structure and firm performance analyzed 28 listed companies in Palestinian Stock Exchange from the period ranging from 2006 till 2010 using multiple regression models. For the study return of equity, return on assets in earning per share and market value of equity with respect to book value were taken as the dependent variables and short-term debt, long term debt and total debt to total assets and total debt to total equity were taken as independent variables. The result shows that firms performance shows the positive impact on the accounting and market’s measures. The result is also statistically significant with total debt to total assets. On the other hand market value of equity to book value of equity was significant with total debt to total assets along with short term debt to total assets. Final conclusion was that Palestinian companies had low accounting performance and better market performance as compare to neighboring counties (such as Jordan)

Dr. Aurangzeb and Anwar ul Haq (2012)\(^1\), studied the companies of Pakistan in the Textile sector. They studied the determinants of the capital structure. Their study was for the period ranging from 2004 till 2009. The variables such as firm size, tangibility of assets, sales growth and profitability were the independent variables and the leverage was the dependent variable. The relationship between independent and dependent variable was analyzed by multiple regression technique. As a result the study shows the there exist the inverse relationship between sales growth and leverage. On the other hand the other independent variables such as firm size, profitability and the tangibility of the assets show the significant positive relationship with leverage.

**Literature Review on Multinational Companies.**

Lee and Kwok (1988)\(^2\) examined whether the same amounts of agency costs, bankruptcy costs and debt ratio are there in US based multinational corporations (MNC) and domestic corporations. The magnitude of multinational operations was measured using the foreign tax ratio. They explained that domestic firms tend to have more debt ratio than MNC and MNC’s do not have lower bankruptcy costs.


Burgman (1996)\textsuperscript{1} studied whether MNCs and domestic corporations have the systematic differences in their traditional capital structure determinants or not. The results suggest that in the multinational capital structure decisions, the political risk and exchange rate risk are relevant. The purely domestic firms have lower agency costs of debt than MNC’s and international diversification does not lower earnings volatility for MNCs.

Ghosh, A., Cai, F., & Li, W. (2000)\textsuperscript{2} explore the determinants of capital structure of 362 manufacturing industries in U.S from 19 different industries from compustat file and 256 companies from 21 different industries from largest fortune 500 companies in U.S using regression and correlation models. The independent variables taken for the study were size, growth of assets, non debt tax shields, fixed asset ratio, profit margin, research and development expenditure, advertising expenditure, selling expenses and coefficient of variation of cash flows as business risk the result showed the significant t values of growth of assets, fixed asset ratio and R & D expenditure was significant. They concluded that the greater amount of equity finance was used by the companies which were expecting high growth in the future. The level of leverage increase with the decrease in the R & D expenditure. In 1982 the regression results showed that the growth of assets were not significant but the fixed asset ratio was significant. They also found that the relationship between business risk and leverage was quadratic- first increasing and then decreasing. This conforms with the traditional

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theory which suggests that when risk is low, higher will be the debt level, but with higher risk, debt level should be lower.

Doukas and Pantzalis (2003)\(^1\) report that lower proportion of long term debt is used by the globally diversified firms in their capital structure. They argue that the agency problems, monitoring costs and information asymmetry for debtors are increased due to internationalization. Thus, firms use less debt to mitigate the effect of agency problems arising from diversification.

In contrast, Akhtar (2005) examines, “the determinants of capital structure for Australian multinational and domestic corporations”\(^2\). The results show that the level of leverage does not differ significantly between the two groups and that growth, profitability, and size are significant determinants of leverage. For domestic corporations, collateral value of assets is a significant determinant of leverage but bankruptcy costs are not significant. For, MNCs, bankruptcy costs and the level of geographical diversification are significant.

Akhtar, S., Oliver, B. (2006) in their paper, “The determinants of capital structure for Japanese Multinational and Domestic Corporation”\(^3\) studied the sample of 360


Japanese multinational and domestic corporations over a 10-year period to 2003 for the determinants of capital structure for Japanese multinational and domestic corporation and were of the view that Japanese multinational have significantly less leverage than Japanese domestic corporations. They also reported that Japanese multinational corporations are significantly older, larger and have significantly higher agency costs, business risks, free cash flows, foreign exchange risks, growth, non-debt tax shields, political risks and profitability and significantly lower bankruptcy risks and collateral assets than Japanese domestic corporations.

Being a multinational corporation in Japan is significant in explaining capital structure for firms generally. In addition, the economic determinants of capital structure are not consistent for domestic and multinational corporations. They also found that economic determinants of capital structure for Japanese domestic corporations include firm age, agency costs, business risks, collateral value of assets, free cash flow, profitability and size. For multinational corporations the economic determinants of leverage are agency costs, bankruptcy risks, business risks, collateral value of assets, growth, non-debt tax shields, profitability and size. They found firm age, business risks, free cash flows, growth, non-debt tax shields, political risks and profitability are the significant variables that explain the difference in leverage between the sample of domestic and multinational corporations in Japan.

Panteghini.M. Paolo (2006)¹ expressed his views on the capital structure of multinational companies under tax competition. He studied the relationship

between the governments’ tax strategies and the debt policies of multinational companies. He analyzed the effects of taxation on financial choices, and measure the impact of both default and policy risk on the optimal capital structure of a representative MNC. He proved that the income shifting raises the tax benefit of debt financing, thereby stimulating debt financing and it also delays default. He also studied that the structure of financial markets and institutions may matter in terms of fiscal policies. He proved that an increase in either the cost of default or the cost of income shifting raises the equilibrium tax rate. He said that the cost of default may affect governments’ tax strategies. In particular, both default procedures and debtors’ protection rights are expected to affect government’s fiscal strategies. He also said that the more stringent anti-avoidance devices, such as thin capitalization and CFC rules, allow governments to set higher tax rates. Finally, he had shown that risk had an ambiguous impact on government’s strategies. He said that the policy risk reduces the equilibrium tax rate and on the other way an increase in both business and default risk leads to higher tax rates.

Khrawish, H. A. (2010)¹ explored the determinants of capital structure of 30 industrial companies which were listed on the Amman Stock Exchange from the period ranging from 2001 till 2005. Size, tangibility, profitability, long term debt and short term debt were the five independent variables which were taken to compare the relationship between the leverage ratio (long term debt/total debt) using correlation and regression models. The result showed that the profitability was significant negatively with leverage whereas size, tangibility, long term debt and short term debt showed the significantly positive relationship with leverage.

Leverage also showed the negative correlation with short term debt and positive correlation with total assets, tangibility and long term debts. Thus, it was concluded that the growing companies used short term debt rather than long term debt. On the other hand, large and profitable companies were less likely to use short term debt and tend to use less debt overall.