CHAPTER 2

REVIEW OF LITERATURE

Capital structure can be defined as the mixture of firm’s capital with debt and equity and it has been one of the most argumentative subjects in corporate finance, since the outstanding study of Modigliani and Miller in 1958 (Bevan and Danbolt, 2004). Many theories have been developed in the literature of finance for examining the determinants of capital structure and these theories focus on identifying the significant determinants which are likely to have a major role in the leverage decision. Previous studies have shown that a number of factors affect firm’s capital structure choice, such as tangibility, tax, size, profitability, growth, non-debt tax shield, volatility etc. In their illustrious work, Harris and Raviv (1991) summarizes that “leverage increases with fixed assets, non debt tax shields, investment opportunities and firm size and decreases with volatility of earnings, advertising expenditure, the probability of bankruptcy, profitability and uniqueness of the product”. However, the relationship between the factors and capital structure is not consistent. Many empirical researchers have explored the determinants of capital structure from different point of views and in different environments related to developed and developing economies. The empirical results vary and sometimes contradict in many studies. It is still debated what are the significant determinants of capital structure and how they impact capital structure decision, even though various studies have been conducted on the relevant subject. In this chapter, researcher intends to throw light on different variables, methodology and findings of empirical studies conducted on this topic. The present chapter has been organized into three sections. In the first section, researcher intends to review past empirical studies on determinants of capital structure, the second section includes the review of studies establishing relations of capital structure with cost of capital, earnings per share and market value of firm and section three presents the summary of reviews conducted.

2.1 STUDIES RELATING TO DETERMINANTS OF CAPITAL STRUCTURE

Taub (1975) tried to ascertain the factors influencing a firm’s choice of a debt equity ratio. For this study a total of 89 firms from Unites States were chosen randomly over a period of ten year from 1960 to 1969 and the likelihood-ratio statistics and t-test were used to test the hypothesis described therein. The empirical results of the study in terms of the expected sign of the co-efficient were mixed. The return to the firm, long term rate of interest
and size of the firm revealed a positive influence on the firm’s debt equity ratio as per the expectation. The impact of tax rate on debt equity ratio was negative which is contrary to both the Traditional view and the Modigliani-Miller approach. The period of solvency had negative relation with leverage although not significant. The tax rate had negative and significant relation with debt equity ratio.

Bhat (1980) made an attempt to analyze the determinants of financial leverage and to investigate the relationship between the leverage ratio and institutional characteristics viz. firm size, variation in income, growth, profitability, debt service and dividend payout through correlation and regression analysis. The cross-section data for this study were collected for six years from 1973 to 1978 from only one industry i.e., Engineering Industry, so as to alleviate the effect of industry type on the financial leverage ratio. The study reveals that firm size, growth rate and the degree of operating leverage does not have any significant relationship with financial leverage whereas earnings rate, business risk, dividend payout ratio and debt service ratio have been found to be negatively related. Only the relation of operating leverage with leverage has been found positive but insignificant relationship. The study observed that the institutional characteristics are important determinants of financial leverage ratio.

Venkatesan (1983) tried to explore the relationship of certain exogenous variables with the financial leverage. He used the data of 66 firms from four different industries for a time span of four year from 1977 to 1980. He attempted to analyze the impact of seven different variables on financial structure of firms by using the multiple regression model, correlation and t-test. The study reveals that null hypothesis proposed in the study that size does not have any relationship with financial leverage could not be rejected for any of the industries. Coverage ratios revealed the significant relationship to the financial structure in all the industries except for steel industry in intra-industry model during study period. Business risk and growth was not found significantly related to financial structure in any of the industries examined. In the inter-industry model, low-levered firms revealed significant relationship between selected variables except growth ratio and financial leverage. But medium and high levered firms were not having any significant common determinant of their financial structure.

Titman and Wessels (1988) introduced a factor analysis technique for estimating the impact of unobservable attributes on the choice of corporate debt ratio using the data from the
469 UK firms for the period of nine years from 1974-82. The study found that debt levels are negatively related to uniqueness of a firm’s line of business. The results also indicate that transaction costs may be an important determinant of capital structure choice and short term debt ratios were shown to be negatively related to firm size. Non-debt tax shield, volatility, collateral value and future growth have not any significant impact on debt ratios.

Shanmugasundaram (1993) conducted a study on intra-industry variations in the capital structure for the Indian pharmaceutical companies and found that intra industry variations can be explained by the existing theories of capital structure. The higher the proportion of fixed assets to total assets and the higher the growth rate of assets, higher is the industry debt equity ratio. The lower the ratio of operating income to total assets and operating income to net sales, higher is the debt equity ratio. This shows that the Indian companies are shifting from high debt to high equity over the period clearly indicating consistency with the Static Trade off theory.

Rani (1997) in her Ph.D. thesis used backward multiple regression model to identify significant variables affecting capital structure by considering leverage ratio as dependent variable. The independent variables were size, growth, operating leverage, business risk, profitability, dividend payout ratio, debt coverage and cash flow coverage. She concluded that while designing capital structure of a firm, the companies give prime importance to the size, growth, business risk, tax shield, profitability and dividend payout ratio.

Kakani and Reddy (1998) attempted to find out the determinants of the capital structure for 400 firms for a period of 11 years from 1985 to 1995 by using correlation and multiple regression. The study has analyzed measure of short-term and long-term debt rather than an aggregate measure of total debt. And he also analyzed the empirical implications of liberalizations of the Indian economy on the determinants of capital structure of the firms. Firms’ diversification strategy and size were found to be of no significance in deciding the leverage level of firm. Profitability and capital intensity were found to be negatively related with leverage and considered most significant factor in deciding the capital structure of the firm. In addition, earnings volatility and non-debt tax shield were significantly negatively related to short-term and total debt of the firm. Uniqueness of the firm has become a (positively related) significant factor in the determination of the short-term and total leverage of the firm. The study also demonstrated that liberalization of the Indian economy appears to have affected the determinants of capital structure.
Samarakoon (1999) examined the determinants of leverage in a cross section of listed companies in Sri Lanka using a sample of firms listed in the Sri Lanka Stock Exchange. The results indicate that the use of long term debt is relatively low. The tangibility and growth opportunities are not related to leverage. Firm size is reliably positively related to leverage indicating a tendency for large firms to use more leverage. Profitability is negatively correlated to leverage suggesting that more profitable firms tend to use less leverage.

Bevan and Danbolt (2000) analyzed the dynamics in the capital structure of UK companies from 1991 to 1997. They observed significant changes in the relative importance of the various debt elements over time, as well as changes in the relationship between gearing and the level of growth opportunities, company size, profitability and tangibility. The results of study suggest that the nature of the credit market in the UK has changed significantly during the 1990s, with large companies using less bank finance and banks increasingly lending to smaller firms. At the same time, bank debt appears to have become more closely related to corporate profitability and collateral values.

Pandey, et al. (2000) analyzed the 221 Thai manufacturing firms for the period of 1990-95 to find out the financing pattern of these firms during the period of country’s financial liberalization and economic success. The results of the study shows that the Thai manufacturing firms have been financing more than half of their total assets through debt during study period and share of long term debt to short term debt has gone down from 40 percent to 24 percent during the same period. The result of the study reveals a positive relationship between debt and tangible assets, debt and growth, debt and size in most of the manufacturing firms of Thailand whereas a negative relationship is found between debt and profitability, debt and interest coverage and debt and firm’s uniqueness. It is further disclosed through CFO’s survey that Thai managers prefer to finance their assets by retained earnings and straight debt and then if required external common equity is used as a last resort.

Lind (2001) investigates the capital structure choices of non-listed firms in Sweden over the period from 1997 to 1999 and then, compares the results with listed firms. The study has applied Pooled regression and Fixed effect model and found a number of differences in the capital structure of listed and non-listed firms, as well as differences both in the relationship of debt levels to the explanatory variables employed and in the magnitude of the effect of the variables. The study supports the expectation of differences based on listed and non-listed firm differences in the agency costs of debt and equity. Tangibility is found
significant to both listed and non-listed firms. Growth options are also a major determinant of capital structure choice for both listed and non-listed firms.

Pandey (2001) examined the determinants of capital structure of Malaysian companies utilizing data from 1984 to 1999. The results of pooled OLS regressions show that profitability, size, growth, risk and tangibility variables have significant influence on all types of debt. These results are normally consistent with the results of fixed effect estimation with the exception that risk variable loses its significance. Unlike the evidence from the developed markets, investment opportunity (market-to-book value ratio) has no significant impact on debt policy in the emerging market of Malaysia. Profitability has a persistent and consistent negative relationship with all types of debt ratios in all periods and under all estimation methods. This confirms the capital structure prediction of the Pecking Order theory in an emerging capital market.

Bevan and Danbolt (2002) examined the capital structure and its determinants from three distinct perspectives of 822 listed UK firms over a period of four years from 1987 to 1991 using mean, median, multiple regression and t-test. It is argued in the study that analysis of capital structure is incomplete without a detailed examination of different forms of corporate debt. The study found that gearing is positively correlated with tangibility and sales whereas negatively correlated with market to book ratio and profitability in a significant manner. In a decomposition analysis, it has been observed that short term debt component is negatively correlated with tangibility while the long term debt component demonstrates the positive correlation. It is further observed that size has significant negative correlation with all short term bank borrowings and positive correlation with all long term debt forms and short term paper debt. It was found that firms with high level of growth opportunity have higher levels of debt than their counterparts with lower market to book ratio. The researcher has observed that the appropriate measure of gearing depends on the purpose of analysis.

Garg and Shekhar (2002) analyzed the debt structure of four large scale manufacturing industries from Indian corporate sector (viz. cotton, chemical and pharmaceutical, engineering and cement industry) over a period of ten years and attempt to underline the determinants of capital structure. The study reveals that asset composition, collateral value of the assets, life of the company and the corporate size were most significant factors in determining the capital structure of Indian firms and business risk has no significance in deciding the leverage of the firms.
Huang and Song (2002) used the market and accounting data from more than 1000 Chinese listed companies up to the year 2000 to document the characteristics of these firms in terms of capital structure. As in other countries, leverage in Chinese firms increases with firm size, non-debt tax shields and fixed assets whereas decreases with profitability and correlates with industries. The study has also found that ownership structure affects leverage. The results of study are different from research outcome of other countries as leverage in Chinese firms’ increases with volatility and firms tend to have much lower long-term debt.

Gaud, et al. (2003) analyzed the determinants of the capital structure of 106 Swiss companies by using static and dynamic models for the period of 1991-2000. The study has found that size of companies, the importance of tangible assets and business risk are positively related to leverage whereas growth and current profitability are negatively associated with leverage. The dynamic analysis reveals the existence of target debt to equity ratio. The study also found that lagged profitability has a negative impact on leverage, confirming the prediction of a short term pecking order behavior towards the target ratio. The sign of these relations suggested that both the Pecking Order theory and Trade-off hypothesis are at work in explaining the capital structure of Swiss companies although more evidence exists to validate the latter theory. Their analysis also shows that Swiss firms adjust toward a target debt ratio but the adjustment process is much slower than in most other countries.

Gonenc (2003) examines the impact of profitability, asset tangibility, size and growth opportunities on capital structure decisions of Turkish industrial firms. The study aims to show that corporate governance and equity ownership structure could influence the relationship between debt ratios and firm’s characteristics. Using regression analysis, the researcher has found that characteristics of firms along with equity ownership by managers, financial institutions, government and stock market activities determine the capital structure choice of Turkish firms with the similar way as in developed and developing countries. There is only one exception i.e., growth opportunities of firms which increase with both total debt and long-term debt ratio.

Rao and Lukose (2003) study presents empirical evidence on the determinants of the capital structure of non-financial firms in India based on firm specific data. A comparative analysis is done for pre-liberalization and post liberalization periods. The study period and sample firms for pre-liberalization period are 1990-1992 and 498 respectively. The same for post-liberalization period are 1997-1999 and 1411. Empirical results has observed that tax
effect and signaling effect play a role in financing decisions whereas agency costs effect financing decision of big business houses and foreign firms. It is also revealed that size of the firm and business risk becomes significant factors influencing the capital structure decisions during post-liberalization period.

Baral (2004) has made an attempt to examine the determinants of capital structure of the companies listed on Nepal Stock Exchange by using the correlation and multiple regression models. The study found that coefficient association with corporate size, corporate growth and earning rate are statistically significant and explain around 72 percent of variation in financial leverage and whereas remaining four variables i.e. business risk, dividend payout, debt service capacity and degree of operating leverage play an insignificant role, explaining only 5 percent of the variation. It is further advocated that statistically insignificant coefficient associated with size and growth imply that financial institution do not care for their debt service capacity but do care for the expansion of their business.

Dailida and Novikov (2004) in their research work on capital structure answered to the question whether the corporate financial leverage decisions differ significantly between developing and developed countries and the debt ratios in developing countries are influenced by the same factors as they are in developed countries. The study has found that systematic factors like GDP growth, inflation rates and the development of capital markets distort the way the debt ratios are influenced by the factors in the developing countries. The answer to the complementary question about Ukraine in relation to the tangibility variable was highly significant in their regressions and confirmed the assumptions of the relevant theories tested for non-transition economies. Their assumption is that the other variables could turn significant if the sample were bigger. The very high significance level of the coefficient on the variable confirms the assumption that the environment with unloaded production capacities and excessive tangible assets are used to cover current funding needs and thus, the environmental factors show their importance in case of a transition economy. Though the results are consistent with the expectations but the space for skepticism is left after analysis is based on the low overall impact (explanatory power) of the variables. This can be due to results of statistical and measurement errors, differing institutional settings of the countries, the way financial statements are prepared and the availability of different forms of financing.

Frydenberg (2004) has applied panel data regression technique to estimate the parameters that may affect the capital structure of Norwegian firms during 2001-06. The
study found that fixed assets, growth, size, taxes, return on assets and industry category are important determinants of capital structure. The study has found that only growth measured by elasticity between debt and fixed assets seem to have any economic significance. Other variables are statistically significant, however, they do not have a trivial magnitude of the elasticities. The study confirms the common belief that the asymmetric information about returns and expected bankruptcy costs has negative effects on the debt-ratio while agency cost of management, asymmetric information about risk and the tax shelter effects of debt financing are increasing the leverage of the firms.

Shah and Hijazi (2004) made an attempt to find out the possible determinants of capital structure of Pakistani listed firms. The study used data from 445 firms in non-financial sector for the period of 1997-2001. By using panel data regression analysis, the study found that tangibility is positively correlated with debt but the relationship is not statistically significant. The results of the study disclose positive relation between size and leverage which indicates that large firms will employ more debt. The growth and profitability have negative relation with leverage, thus, supporting the Pecking Order theory. The study reveals that size, growth and profitability have statistically significant relationship with leverage.

Hijazi and Tariq (2006) attempt to determine the capital structure of listed firms in the cement industry of Pakistan. The study finds that a specific industry’s capital structure exhibits unique attributes which are usually not apparent in the combined analysis of many sectors. The study took 16 of 22 firms in the cement sector, listed at the Karachi Stock Exchange, for the period of 1997-2001 and analyzed the data by using pooled regression in a panel data analysis. They have chosen four independent variables i.e. firm size (measured by natural log of sales), tangibility of assets, profitability and growth. The results of the study have disclosed that all variables included in study except size turn out to be highly significant.

Saravanam (2006) made an attempt to examine the impact of determinants of capital structure, especially promoter holdings on the choice of debt equity ratios in the Indian context. The study has applied mean, median, multiple regression analysis and Durbin-Watson test on data collected from 423 firms classified into seven sectors for the financial years between 1992-93 and 2001-02. The study has observed that size and asset composition have negative relation with debt-equity contradicting with the results of Trade-off theory whereas profitability, growth, tax shield, risk and promoter holdings have positive
relationship. It is further observed that promoter holdings and leverage is positively associated at 10 percent significance level. The results of this study were found to be different from the results of developed countries.

Chen and Hammes (2007) analyzed the factors influencing firm leverage. The study has used market capital ratio, book capital ratio and book debt ratio as measures of leverage. They had used an unbalanced panel of seven countries, Canada, Denmark, Germany, Italy, Sweden, the UK and the US. The study has found that firm size, profitability, tangibility and market-to-book ratio have significant impact on the capital structure choices of firms. Tangibility is positively related to leverage while profitability shows a negative significant relation to leverage. Size of the firm is found to be positively and significantly related to leverage. The impact of the market-to-book ratio varies in the book debt ratio model but shows a negative and significant relation in the market leverage model for all countries except Denmark which shows an insignificant parameter value.

Eldomiaty (2007) has examined the effects of the assumptions of three theories of capital structure (Trade-off, Pecking Order and Free Cash Flow) on the firm’s decision to change its leverage. The results show that the capital structure decisions are affected to a large extent by two theories i.e., Trade-off and Pecking Order. This means that searching for an optimal capital structure is not one-way to go. Secondly, as long as corporate capital structure decisions follow more than one theory, further research is warranted in the conditions under which each capital structure theory dominates relatively. These conditions represent firm’s characteristics such as size, growth, business risk, etc. Third, previous studies on the determinants of capital structure in developing and emerging markets show a considerable high-degree of convergence. That is, common determinants of capital structure do exist in developed as well as developing economies. This provides a support to the call for searching for the conditions under which a firm moves from a theory to another.

Frank and Goyal (2007) examines the relative importance of various factors in the leverage decisions of publicly traded American firms from 1950 to 2003. The most reliable factors were median industry leverage (positive effect on leverage), market-to-book ratio (negative), tangibility (positive), profits (negative), log of assets (positive) and expected inflation (positive). The empirical evidence seems reasonably consistent with some versions of the Trade-off theory of capital structure.
Qian, et al. (2007) used a panel data set of stock market and accounting data for 650 publicly listed Chinese companies during the period of 1999-2004 and examined the determinants of the capital structure for publicly listed Chinese companies. Their results show that publicly listed Chinese firms adjust toward an equilibrium level of debt ratio in a given year but the adjustment process is very slow. They also found that firm size, tangibility and ownership structure are positively associated with firm’s leverage ratio while profitability, non-debt tax shields, growth and volatility are negatively related to firm’s leverage ratio. Lastly, they found that lagged profitability has a negligibly small and positive impact on firm’s leverage ratio.

Shah and Khan (2007) have applied two variants of panel data analysis in an attempt to find out the determinants of capital structure of KSE listed non-financial firms for the period 1994-2002. Pooled regression analysis was applied with the assumption that there were no industry or time effects and by using fixed effect dummy variable regression, the coefficients for a number of industries were significant showing there were significant industry effects, hence, the study has accepted the latter model for analysis. The study has used six explanatory variables to measure their effect on leverage ratio. Three of these variables i.e., tangibility, profitability and growth were significantly related to leverage ratio whereas the remaining three variables i.e., earning volatility, size and non-debt tax shield were not statistically significant in having relationship with the debt ratio. The results approve the prediction of Trade-off theory in case of tangibility variable whereas the earning volatility and non-debt tax shield variables fail to confirm to Trade-off theory. The growth variable confirms the Agency theory hypothesis whereas profitability approves the predictions of Pecking Order theory. Size variable neither confirms to the prediction of Trade-off theory nor to asymmetry of Information theory.

Jong, et al. (2008) examined the role of firm-specific determinants of corporate leverage choice around the world using a sample of 42 countries divided equally between developed and developing countries. They distinguish two types of effects: the direct effect on leverage and the indirect effect through the influence on firm-specific determinants of corporate leverage. They found that the impact of several firm-specific factors like tangibility, firm size, risk, growth and profitability on cross-country capital structure is significant and consistent with the prediction of conventional capital structure theories. On the other hand, they also observed that in each country one or more firm-specific factors are not significantly related to leverage. Analyzing the direct impact of country-specific factors
on leverage, the evidence suggests that creditor right protection, bond market development and GDP growth rate have a significant influence on corporate capital structure. It implies that in countries with a better legal environment and more stable and healthier economic conditions, firms are not only likely to take more debt but the effects of firm-level determinants of leverage are also reinforced. They concluded that country-specific factors do matter in determining and affecting the leverage choice around the world and it is useful to take into account these factors in the analysis of a country’s capital structure.

Psillaki and Daskalakis (2008) investigated the capital structure determinants of Greek, French, Italian and Portuguese small and medium sized enterprises (SMEs). They compared the capital structure of SMEs across countries and considered if differences in country characteristics such as financial development and institutional features may have an impact on capital structure choices. They assess the extent to which the debt ratio depends upon their asset structure, size, profitability, risk and growth. The results show that SMEs in these countries seem to determine their capital structure in similar ways as it is evident by the signs of the statistically significant regression coefficients. They found that size is positively related to leverage while the relationship between leverage and asset structure, profitability and risk is negative. Growth is not a statistically significant determinant of leverage for any of the four countries. They attribute these similarities to the country, institutional and financial characteristics and the commonality of their civil law systems. The study has also observed that these differences are due to firm-specific effects. The study has concluded that firm specific rather than country factors explain differences in capital structure choices of SMEs in these countries.

Qiu and La (2008) investigated the relation between capital structure and firm characteristics in Australian companies. They used panel data regression to study an unbalanced panel of 367 firms over a 15-year period from 1992 to 2006. The research investigates debt ratio and firm characteristic relationships in Australia, where the tax motivation for debt financing is limited in an environment of a tax imputation system. They found that a significant amount of the Australian firms did not use debt and these firms are generally smaller, less profitable and more risky than indebted firms. Unlevered firms also appear to have lower proportions of tangible assets but have better growth prospects than levered firms. These results indicate that unprofitable firms are more concerned about financial distress costs while profitable firms are more concerned about agency costs in making capital structure decisions. Hence, they found that debt asset ratio is positively related.
to asset tangibility but inversely related to growth prospects and business risk measured by unlevered beta of equity. They also found that although levered firms are generally more profitable than unlevered, profitability decreases the debt ratio of levered firms. The study has observed that firm size does not affect the capital structure of Australian firms. These results are consistent with the Pecking Order and the Agency Cost theories but contradict the Trade-off theory.

Rafiq, et al. (2008) used the pooled regression model to analyze the determinants of the capital structure of chemical sector in Pakistan. The study has analyzed 26 of 39 firms in chemical sector for the period 1993-2004. The study has found that profitability is negatively correlated with leverage whereas all other variables have positive relationship. The results show that all the six independent variables explain 90 percent of the variations in the dependent variable and except for firm tangibility, results were found to be highly significant. The study also found that the determinants of capital structure are industry specific.

Salawu and Agboola (2008) examined the capital structure determinants of non-financial firms in Nigeria using a panel of 33 large firms for a period of 1990-2004. The findings revealed that profitability has positive impact on leverage of large firms in Nigeria confirming that the tax advantage of debt financing has relevance in these firms. The results indicate that large Nigerian firms are profitable and they are expected to prefer debt in order to benefit from the tax shield. However, the results reveal that large firms in Nigeria prefer short-term debt to long-term debt financing. The study has observed a significant positive relationship between asset structure (tangibility) and long-term debt ratios. Therefore, collateral value is found to be a major determinant of the level of debt finance. The size of the company was found to have a statistically significant positive relationship with both total debt and short-term debt ratios for the sample. The results reveal that dividend payment does not represent a better financial approach for large firms in Nigeria. In addition, non-debt tax shields are positively and significantly correlated with capital structure. This suggests that large Nigerian firms that have large non-debt tax shields are less leveraged. The evidence of the behavior of large firms in Nigeria is consistent with the Trade-off theory.

Waliullah and Nishat (2008) have applied autoregressive distributed lag (ARDL) econometric framework for 535 public listed non-financial companies from 1988 to 2005 to establish the relationship between leverage and the determinants of capital structure choice of listed firms in Pakistan. The results indicate that size of the firm and growth opportunities are
positively related to debt ratio and it is also observed that more profitable and highly liquid firms will avoid debt and will rely mainly on equity financing. Similarly firms with high risk and more tangible assets will use less debt. Further, the results suggest that state owned firms have been financed heavily through bank loans and that there is a substantial decrease in leverage after the reforms in financial and corporate sector of 1990s in Pakistan. The secondary market development and financial liberalization has been associated with shift of firms from debt market to equity market. The study has strong evidence to indicate that choice of capital structure differs significantly across industries.

Datta and Agarwal (2009) attempt to study the determinants of capital structure in Indian corporate sector and to verify whether any of the well established theories can characterize the Indian corporate financing. That empirical study has included 76 Indian firms for the period 2003-2007, the period of unprecedented growth of Indian economy and applied fixed effect panel data (LSDV) regression. The study has found that financing with internal funds, as suggested by Pecking-order theory has emerged as a major feature of corporate capital structure. Some other determinants, however, have patterns of influences that match with the postulates of Trade-off and Agency Cost theory. The analysis has found that the capital structure pattern on an average portends well for long term development of Indian corporate sector.

Kaur (2009) with a purpose to identify the determinants of the capital structure in Indian cement and automobile Industry reveals the significant variation in the capital structure practices of the firms between two industries and over a period of five years. They have used the sample of 81 and 35 companies from automobile and cement Industry respectively covering the period from 2004 to 2008. It is concluded from the analysis in the paper that profitability, tangibility and WACC are important determinants of capital structure in cement industry. Business risk, profitability and tangibility are statistically significant determinants in case of automobile industry.

Mojtahedzadeh (2009) applied multivariate regression to determine the factors affecting the capital structure of companies in Iran and also to determine whether Static Trade-off and Pecking Order theory are being followed by companies for their capital structure. The research sample included 210 companies listed on Tehran Stock Exchange over a period of five years from 2002-2007. The findings of the study indicate that a negative significant relationship exists between changes in company size and market to book value of
liabilities and between company profitability and book value of liabilities and objectivity and the market to book value of liabilities whereas a positive significant relationship exists between the market to book value ratio of assets and the ratio of book value of liabilities, supporting the Pecking Order theory. On the other hand, a positive significant relationship exists between company profitability and market liability ratio, company history and ratio of market to book value of liabilities, industry conditions and ratio of market value of liabilities whereas a negative significant relationship between ratio of market to book value of assets and market ratio of liabilities, company risk and market ratio of liabilities is in accordance with Static Trade off theory.

Oztekin (2009) examines international differences in the firm-level determinants of capital structure across 37 countries over the period from 1991 to 2006. The study has examined the leverage factors that are consistently important for capital structure decisions of firms around the world. The most reliable determinants are past leverage, tangibility, firm size, research and development, depreciation expenses, industry median leverage and liquidity. The remaining factors i.e. profits for book and market leverage, firm size, tangibility, liquidity give partial support to the Pecking Order theory and Dynamic Trade-off theories. The signs of market-to-book assets ratio and inflation give support to both the Dynamic Trade-off and Market Timing theories. The signs of the reliable determinants give consistent support to the Dynamic Trade-off theory. The impact of leverage factors on capital structure are systematically driven by cross country differences in the quality of institutions that affect bankruptcy costs, agency costs, tax benefits of debt, agency costs of equity and information asymmetry costs.

Akdal (2010) examines the capital structure determinants of 202 companies from FTSE-250 for the time period of 2002-2009 to determine the influence of various firm level characteristics such as profitability, size, growth opportunities, asset tangibility, non-debt tax shield, volatility and liquidity on capital structure. Capital structure is measured by the ratio of total debt, long term debt and short term debt at both book value and market value of equity. The four different models used in the study reveals that there are negative relationship between leverage and profitability, growth, non-debt tax shield, volatility and liquidity whereas positive relationship between leverage ratios and size and asset tangibility. The study has observed significant relationship between leverage and profitability, asset tangibility and liquidity. The unobserved time variant effects have no determining influence for sample companies. It is also highlighted in the paper that total leverage at market value of equity is
the most important dependent variable as a proxy of capital structure followed by long term leverage at market value of equity. The regression results are supporting different capital structure theories.

Bhattacharjee (2010) has conducted an empirical study on Indian industries covering 151 firms from 13 industrial sectors to find the significant determinants of capital structures of Indian Companies and investigate the relationship of debt-equity ratio with some independent variables. It is concluded from the research that 60 percent of the sample companies accounted for debt equity ratio below one which means maximum number of companies of the sample are equity capital oriented. It has also been observed that capital structure of Indian firms and industries are not similar. Hence, it can be concluded that financial structure differs firm wise as well as industry wise. It has been found that variables like, liquidity, earnings price per share, return on capital, dividend payout ratio and growth of profits have emerged as significant variables affecting debt equity ratio of the firms.

Lakshmi (2010) examines the effect of ownership structure on capital structure. The study does a cross sectional analysis of capital structure variations across firms for 1314 firms for the year 2008 by using ordinary least squares regression. The study shows that the ownership structure defined as promoters’ shareholding and institutional investors’ shareholding is significantly negatively related to the level of debt employed by the firm. From the control variables included in the study size, growth, profitability, tangibility and business risk turn out to be significant for determining the capital structure of Indian Corporate Sector.

Pathak (2010) examined the relative importance of six factors in the capital structure decisions of publicly traded Indian firms. The study has used the data from over 135 firms listed on the Bombay Stock Exchange during the period of 1990-2009. The study has observed the variation in capital structure using a regression model. Six major factors (tangibility, firm size, growth, profitability, liquidity and volatility) and one second tier factor (R & D) are identified and their relations to leverage are studied. The study has found that leverage increases with increase in firm size, tangibility and growth. In contrast, the study has also found that leverage increases with decrease in business risk, profitability and liquidity.

Vinayek and Gupta (2010) have conducted an empirical research to compare the determinants of capital structure of Indian Drugs and Pharmaceutical industry between pre-liberalization and post-liberalization period. They found that there is significant difference
between the determinants of capital structure of pre-liberalization and post-liberalization period. The variables like profitability, capital intensity and collateral value of assets which are insignificant in the pre-liberalization period become significant to the market value debt equity ratios in the post liberalization period. Market to book value ratio and age tended to be insignificant determinants for the whole period. Size is found to be a significant determinant to book value debt equity ratio in pre-liberalization period while in post-liberalization period it is found to be an insignificant determinant. Non-debt tax shield is found to be a significant determinant to book value debt-equity ratios in pre-liberalization period while in post-liberalization period it is significant to market value debt-equity ratios.

Afza and Hussain (2011) examines the industry specific attributes of firms in Automobile, Engineering and Cable and Electrical goods sectors of Pakistan by using pooled data regression model on 37 firms for the period from 2003 to 2007 to identify the determinants of capital structure across selected manufacturing sector of Pakistan. The study found that profitability, taxes and liquidity are highly significant factor in determining the capital structure of sample firms. The study reveals that taxes and size have positive relationship whereas profitability, non-debt tax shield, liquidity and cost of debt have negative association with capital structure. The results of this study suggest that there are two main theories which affect the attributes of capital structure of a firm either positively or negatively i.e. Static Trade-off theory and Pecking Order theory.

Ahmed and Hanif (2011) had applied the regression with common effect to analyze the empirical validity of two famous theories i.e., Trade-off and Pecking order by using the data from 132 firms in textile sector of Pakistan for the period of 2001-2009. The results of the study showed that tangibility is most influential determinant in debt financing decision and have positive association with leverage which supports the prediction of Trade off theory and growth with its negative coefficient also supports the Trade-off theory but that was not statistically significant. However, the negative coefficients of size and profitability have supported the hypothesized predication of the Pecking Order theory.

Ghani and Bukhari (2011) used the data from listed energy sector companies in Pakistan to find out the determinants of capital structure and finding out the impact of four variables i.e., tangibility, size, growth and profitability of the firms on their leverage. The sample included data from 20 companies for the period spanning from 2004 to 2008. Their results show that all these factors affect the leverage of a firm in some degree. They found
that tangibility and size have positive association with leverage which supports the predictions of Static Trade-off theory. On the other hand, profitability was found to have negative relationship with a firm’s level of debt that supports the viewpoint presented by Pecking Order theory. Growth had positive relationship with leverage thus supporting the simple version of Pecking Order theory.

Gill and Mathur (2011) with a purpose to find the factors that influence financial leverage of Canadian firms used a sample of 166 Canadian firms listed on the Toronto Stock Exchange for a period of 3 years i.e., from 2008-2010. The results show that financial leverage of Canadian firms is influenced by the collateralized assets, profitability, effective tax rate, firm size, growth opportunities, number of subsidiaries and industry dummy.

Mutalib (2011) examined an empirical analysis of determinant of capital structure in Nigerian Cement Industry for the period of 2000 to 2009. They used eight exogenous variables to measure their effect on capital structure. Seven of these variables were significantly related to leverage ratio whereas the remaining one variable was not. Considering the results, profitability, size of the firm, liquidity and lag of leverage are negatively significantly related to leverage whereas potential for growth, age of the firm, tangibility are positively significantly related with the leverage ratio. Their results approve the prediction of Pecking Order theory in case of profitability whereas earnings volatility fails to confirm to Trade-off theory.

Riaz and Afzal (2011) applied a “Leverage Model” in a pooled cross-sectional framework to 236 individual firms from five large scale sectors i.e., textile, engineering, sugar, chemical and cement for a period of eight years from 2001 to 2008 to investigate the role of firm’s financial factors that might determine the capital structure. The study found that profitability and growth in assets have significant negative association with debt ratios whereas mixed results are observed for tangibility and size of the firm. The study also revealed that sales growth rate and dividend payout ratio is not significantly related for the sample firms.

Singh (2011) have examined the capital structure practices of developing countries through a study of Indian Corporate sector by classifying the capital structure of a sample of 298 out of top 500 manufacturing companies for a period of 11 years commencing from 1995-1996 to 2005-06. The study has used earning rate, age, non-debt tax shield, dividend payout ratio, cost of borrowing, corporate tax rate and uniqueness as determinants of capital
structure and found that all variable have negative relationship with capital structure. The study has observed that companies are shifting from higher capital range towards lower capital structure range. It implies from the study that firms are using lesser amount of debt when selected variables attain a higher value.

Zaheer, et al. (2011) studied the data of 172 companies from the textile sector of Pakistan for a period of six year from 2003-08 to reveal the significant determinants of capital structure of sample companies. Size of firm has remained significant for analysis of each sub sector of textile industry. Statistical results show that asset structure have positive significant association with leverage for all sector except weaving and age of firm have positive significant relationship with leverage in spinning sector and combined analysis only.

Cuong and Canh (2012) used the panel regression to investigate the determinants of capital structure for Vietnam’s seafood processing enterprises. The investigation has been performed for a sample of 92 SEA’s during 2005-2010. The study differentiates the firms into two groups- firms that maintain a debt ratio above 59.27 percent (OSA’s) and debt ratio less that 59.27 percent (LSEA’s). Size by asset has positive relationship with financial leverage and tangible assets have negative significant relationship for both types of enterprises. Profitability and liquidity are significant determinants of capital structure for LSEA’s whereas interest exposure is significant for OSEA’s. The findings of study are consistent with the Trade off theory and Pecking Order theory.

Kumar, et al. (2012) tested the influence of six independent variables on capital structure by using multiple regression analysis for the data from 17 Pharmaceutical Indian companies over a period of five years i.e., 2004-2008. The study revealed that agency cost of equity, operative leverage, tangibility and debt service capacity play a significant role in the determination of the capital structure of sample companies. Agency cost of equity and bankruptcy risk is negatively correlated with leverage whereas growth rate, operating leverage, tangibility and debt service capacity of the firms are positively correlated. The study supported the agency cost model and Static Trade off model in describing capital structure pattern of the Pharmaceutical companies.

Rasoolpur (2012) analyzed the capital structure determinants of Indian Corporate sector by selecting a sample of 298 firms out of top 500 manufacturing firms covering a time span of eleven years from 1995-96 to 2005-06 using correlation, regression analysis, fixed effect approach to panel data and Durbin Watson test. Size, uniqueness and operating
leverage are positively related to capital structure whereas cash flow coverage, earning rate, growth, liquidity, non-debt tax shield and dividend payout ratio have negative relation with capital structure. Fixed-effect firm model shows that liquidity and uniqueness are only significant determinant of capital structure for the sample firms.

Srivastava (2012) studied the determinants of capital structure in Indian Pharmaceutical companies for the pre and post liberalization period extended over the years from 1977-78 to 2006-2007 using regression analysis, Jargue-Bera (JB) test, chow test, t-test and F test. The regression analysis for the total period shows cash ratio and firm size to be the only significant variables at the 5 percent level. In the pre-liberalization period i.e., 1977-78 to 1991-92, profitability, non-debt tax shield and asset structure are the significant variables although profitability and asset structures are significant with the negative signs. In the post liberalization period, cash is found to be significant with a negative co-efficient. The study shows that the determinants which were significant in the pre-liberalization period do not remain significant in post liberalization period. The study concluded that Indian public limited companies depend heavily on borrowings than equity and results of the analysis also found that both the theories, i.e., Trade-off and Pecking Order are applicable to Indian Corporate Sector.

2.2 OTHER STUDIES

In this section, the researcher have included the studies relating to the impact of capital structure on cost of capital, market value of firm and profitability and other theoretical developments on this particular topic.

Wippern (1966) made an attempt to determine the relationship between leverage and the cost of capital by using data from seven different industries for a total of 50 firms from 1956 to 1963. The coefficients of control variables i.e. size, growth and dividend payout remain consistent in sign among the cross section years and all were significant at the .05 level of significance with the exception of the payout coefficient for 1963, which was significant at the .10 level and the coefficient of size variable for 1958 which was not statistically significant. The study has observed a linear increasing relationship between equity yields and leverage. The study provides clear and strong support for the intermediate or Traditional theory of capital structure. The study is also supporting the Modigliani-Miller arbitrage argument and in addition to tax effects, firms do gain by employing mix of financing sources.
Baxter (1967) have analyzed the relationship of leverage, risk of ruin and cost of capital by taking the data from three firms for a period of 20 years from 1946 to 1965. The researcher has argued that the risk associated with excessive leverage will likely to raise the cost of capital of firm. The study has observed that high degree of leverage increases the probability of bankruptcy and therefore, increases the riskiness of the overall earnings stream, resulting the excess leverage to reduce the total value of firms. Hence, the study has supported the Traditional view of capital structure. The study has found that risk of ruin is not linear with the reliance on debt, as the interest rate on debt will rise slowly, if the reliance on debt is low but the interest rate may begin to rise sharply, as the capital structure becomes more risky.

Davenport (1971) examined the relationship of leverage and the cost of capital by using British data of 148 companies (from three different industries) listed on London stock exchange for a decade from 1953 to 1963. The study has not observed any clear and unambiguous relationship between leverage and cost of equity capital. The study found that the overall cost of capital or the minimum rate of return on new investment projects required to maintain the market value of ordinary shares is independent of the proportion of debt and preference shares in the capital structure of the firm, inconsistent with the MM hypothesis. Rather the results are indicative of U-shaped cost of capital schedule with respect to leverage, supporting Traditional view of the relationship between leverage and the cost of capital.

Robichek, et al. (1973) examined the effect of leverage on the cost of equity capital for U.S electric utility firms for the period from 1962-1970 (86 firms in 1962 and 114 firms for each of the other years). The study have used for different definitions of cost of equity and three definitions for leverage. The study has found that leverage has a measureable effect on the cost of equity capital. It has also been observed in the study that book-value of measure of leverage is superior to a market value basis in measuring the effect of leverage on the cost of equity capital. The study have further supported that flow-through companies have lower cost of equity capital then non-flow through electric utility companies.

Pandey (1978) examined the impact of corporate debt on the cost of equity through the theoretical model and test that model empirically by using multiple regression, t-test and F-test. The study was conducted by selecting 131 companies from four industries, viz. Chemical, Cotton, Engineering and Electricity over a period of three cross sectional years.
The study revealed that multiple correlation co-efficients are significant for chemical, cotton and electricity but insignificant for engineering industry. Size and dividend payout ratio have negative relation with cost of capital. Other variables viz. growth, liquidity and earning variable were found to be insignificant for all industries. No clear cut generalization could be made on the basis of empirical result regarding the role of corporate debt in influencing the cost of equity. The study revealed that cost of equity may decrease up to a period for few firms but for others, the use of debt may increase the cost of equity and for some cases debt may not have any impact on cost of equity. It is concluded in this paper that the traditional view of capital structure i.e. cost of capital remain horizontal over a range of leverage is supported.

DeAngelo and Masulis (1980) generalized the Miller’s differential tax model to include the major feature of U.S. tax code i.e. the existence of corporate tax shield substitutes for debt such as accounting depreciation deductions and investment tax credits. Introduction of these realistic corporate tax code features leads to a market equilibrium in which each firm has a unique interior optimum leverage decision due solely to the interaction of personal and corporate tax treatment of debt and equity. They further explained that the presence of tax shield substitutes for debt or default costs implies a unique interior optimum leverage decision in market equilibrium.

Rao (1984) have studied the financial statement of twenty companies belonging to chemical industry of Indian corporate sector for the year 1980 to observe the impact of profitability on the debt equity ratio in sample firms. The study has used primary as well as secondary data for analysis. The study has observed the negative association between profitability and debt equity ratio for the entire sample from chemical companies under study. The inferences drawn from analytical interpretation of the paper is that capital employed was basically financed from external debt or equity and internal sources of funds. It has been also observed that for a given level of capital employed higher the generation of internal funds through greater profitability, lower is the need for external debt finances and vice versa.

Ghosh (1994) made an attempt to highlight the lacuna in traditional capital structure theories by analyzing a case study of Eicher Tractor Ltd for a period of five years from1987 to 1992. The study supports that equity is cheaper source of finance than debt and so use of leverage is always disadvantageous. The finding of the study have stated that when the net worth is low, cost of equity may be higher than cost of debt but if the net worth can be
increased by ploughing back, cost of equity comes down below the cost of debt. The study discloses that cost of debt is dependent on lending rates of banks and financial institutions and market rate of debentures and other borrowing. Hence, the cost of capital can be reduced by increasing proportion of equity in the capital structure.

Dhankar and Boora (1996) examined whether optimal capital structure exists in Indian companies, both at the micro and the macro level and relationship between cost of capital, financing decisions and the value of a firm. The study used a sample of 26 widely held Indian private sector companies from top 300 large scale companies from 15 different industries covering the period from 1981-82 to 1990-91. The study found that there is no significant relationship between change in capital structure and the value of a firm at the micro level, however, at the macro level the relationship was statistically significant advocating the existence of an optimal capital structure at macro level. The capital structure of sample companies found to be different significantly. The study also found that change in capital structure has significant negative relation with cost of capital. It was also found that Indian companies do not employ a specific model for computing the cost of capital and determining their target capital structure.

Anderson (2002) in his paper explored the relationships among the firm's financial structure, its choice of liquid asset holdings and growth. One of the predictions of their model is that a long-term reliance on high levels of debt finance tends to be associated with high levels of liquid asset holding. The researcher has tested this empirically by estimating the determinants of liquid asset holdings using panel data sets of Belgian and UK firms. The study has found evidence of a positive relation between leverage and liquid asset holding. In the final section of the paper he has drawn out the implications of this linkage and has identified some prominent features of the European financial landscape that may be seriously growth inhibiting while suggesting other features that may be growth promoting. That result leads into identification of a possible linkage from high debt to high liquidity to slow growth.

Frank and Goyal (2003) used a broad cross-section of US firms over the period of 1980-1998 to test the Pecking Order theory against the Static Trade-off theory of capital structure. The study has rejected all of the predictions of the Pecking Order theory and mean reversion is found both unconditionally and conditional on a range of conventional financial factors, as consistent with the Static Trade-off theory. The study found that firms with very low leverage exhibited much greater persistence of leverage from year to year and firms with
high leverage have a somewhat higher exit rate than do firms with lower levels of leverage. The study also found that when debt matures, it is not completely replaced, hence, existing long term debt will be lower in the subsequent years.

Frydenberg (2004) in his paper reviewed the available theoretical literature. The most important arguments for determining capital structure are the Pecking Order theory and the Static Trade-off theory. Neither of theories provide a complete description of the situation that why some firms prefer equity and others debt under different circumstances. He argued that the capital structure and corporate finance literature is filled with different models but only a few give a complete picture.

Omran and Pointon (2004) have undertaken the study on various factors affecting the cost of capital in the emerging markets. They analyzed the cost of capital in Egypt on the basis of a sample of 119 companies. A number of models were used to measure the cost of equity and in turn the overall cost of capital, which was calculated on the basis of both book and market values. They concluded that the cost of equity is around 12.5 per cent and the overall cost of capital roughly around 12 per cent. Step-wise multiple regressions were used to find the different determinants. They opined that growth and size are particularly important. And for actively traded companies and for heavy industries, in particular, financial and business risks are significant factors. For the contracting and real estate sector, which has a higher cost of capital, fixed asset backing is another key variable. In the food sector, they found the liquidity as one of the important determinants. Finally, they remarked that a satisfactory model could not be found to explain the cost of capital in the service sector.

Gatsi and Akoto (2007) studied capital structure and profitability in Ghanaian banks using panel data methodology. The study covered 14 banks over the period of 1997-2006. It was observed that 87 percent of the total capital of banks in Ghana is made up of debt. Of this, 65 percent constitute short-term debts while 22 percent is made up of long-term debts. This has re-emphasized the fact that banks are highly levered institutions and also highlights the importance of short-term debts over long-term debts in bank financing in Ghana. This significant negative relationship between bank size and profitability suggests that larger banks tend to exhibit lower margins and is consistent with models that emphasize the negative role of size from scale inefficiencies.

Hovey (2007) found that foreign holdings are found to have a significant relationship with the leverage of listed firms in China. Whereas somewhat unexpectedly, institutional
ownership, through legal person holding companies, state ownership and private holdings are not found to have a significant relationship with the capital structure choices of firms in China. The results also suggest that some firm-specific factors that are relevant for explaining firm leverage generally referred to in studies in developed economies, such as, profitability, growth opportunities, size and tax shields are also relevant in China. The age of the firms and the industry to which they principally belong also has significant bearing.

Lipson and Mortal (2007) examined the relation between equity market liquidity and capital structure. They found that firms with more liquid equity have lower leverage and prefer equity financing when raising capital. Similar results were observed in panel analysis with clustered errors and using instrumental variables. Their results were consistent with equity market liquidity lowering the cost of equity and therefore, inducing a greater reliance on equity financing.

Singh and Kaur (2007) investigated the impact of liberalization on cost of capital of Reliance Industries Limited (RIL) for a period of 22 years i.e. from 1982-83 to 2004-05. A declining trend in cost of debt, cost of preference share capital and an increasing trend in both measures of cost of equity and overall cost of capital have been observed after liberalization. In pre-liberalization period, liquidity and leverages ($L_2$ and $L_3$) were significantly correlated, whereas leverage ($L_1$), growth, profitability and size have insignificant correlation with overall cost of capital during post-liberalization period. The profitability, size and liquidity have negative relation with overall cost of capital in post-liberalization period whereas in pre-liberalization period all have positive relationship. Overall results have shown that all variable have insignificant relation with cost of capital. The findings of the study indicated that MM hypothesis i.e. overall cost of capital is independent of capital structure is not applicable to RIL.

Amjed (2008) have applied OLS to test the hypothesized relationship between debt financing and profitability of the firms in chemical sector of Pakistan over a period of six years from 2001 to 2006. The study has reported that significant negative relationship exists between leverage and firm’s performance. The results of the study reveals that long term debt of the industry is about 9 percent, the reason for this low level can be attributed to the nature of financial market and behavior of the entrepreneurs. It is also found that profitability is the most significant factor determining the leverage of the sample firms.
Boodhoo, *et al.* (2008) presents empirical findings based on 2002 to 2006 accounting data for 40 Mauritian firms in support of the main theories developed on capital structure and its determinants and on the impact of debt ratio on firm’s performance. Findings imply that the agency costs, tax rate, capital expenditures and the ownership structure play a fundamental role in financing decision. Unexpectedly, performance and tangibility which have been extensively considered as important determinants in financing decision are not statistically significant in the current model.

Cole (2008) provides the first evidence to test the two major competing theories of capital structure i.e., the Trade-off theory and the Pecking Order theory by utilizing data from four nationally representative surveys conducted by the Federal Reserve Board in the year of 1987, 1993, 1998 and 2003. Their results show that firm leverage as measured by the ratios of total loans to total assets and total liabilities to total assets is negatively related to firm size, age, profitability, liquidity and credit quality and is positively related to firm tangibility and limited liability. In addition, the study found that firm leverage is an increasing function of both the number of banks and the number of non-bank financial institutions with which the firm has business relationships. Finally, they find no significant variations in firm leverage by race or ethnicity but some evidence that female-owned firms use less leverage. In general, these results are broadly supportive of the Pecking Order theory and inconsistent with the Trade-off theory.

Niu (2008) reviewed the existing literature on capital structure theories and seven independent factors affecting capital leverage choice in UK and Germany, the two countries that are homogenous in their level of economic development but follow different institutional traditions. The paper reveals that the relationship between the factors and capital structure is not consistent. The comparison of capital structure across countries reveal that institutional difference may affect the cross sectional relation between leverage and factors. The study also observed that the empirical results for different independent variable vary and sometime contradict in many studies. The study predicted that tangibility and size will have positive association whereas growth opportunities, volatility and liquidity will have negative association with leverage and no clear cut prediction for tax and profitability.

Ramachandra and Rao (2008) attempted to mitigate the problem of assessing the firm performance following an industry distress situation. They have defined the distress situation as one where an industry output and market capitalization contracts by 25 percent. This is to
capture those industry downturn events which are significant and sudden. Firm sales growth and profitability adjusted for industry values are linked to firm debt usage relative to industry values. The study has found that firms using higher debt compared to industry witness slower sales growth. This lends support to the hypothesis that highly levered firms become financially constrained during industry downturns. This forces them to reduce their market building expenditure such as R & D, advertising, distribution, pricing etc which reflects in their post-distress performance. Firm profitability also significantly drops post event compared to the benchmark firm that assumes industry median values of firm characteristics. This is especially significant for smaller firms. A possible explanation for this could be that smaller firms get squeezed both on the sales front and on the expense front. During a downturn smaller firms face higher bankruptcy costs in the form of reducing customer base, costly credit, tougher supplier and credit terms.

Hasan and Butt (2009) explored the relationship between corporate governance and capital structure of listed companies in Pakistan. The study covers the period from 2002 to 2005 for which firm level data for 58 randomly selected non-financial listed companies from Karachi Stock Exchange has been examined by using multivariate regression analysis under fixed effect model approach. Results of study reveal that board size and managerial shareholding is significantly negatively correlated with debt to equity ratio.

Chandrakumarmangalam and Govindasamy (2010) made an attempt to investigate the relationship between leverage (financial leverage, operating leverage and combined leverage) and earnings per share by using the data from seven public limited cement companies for a period of 11 years from 1997 to 2007. The study found that there is significant relationship between DFL and EPS, DCL and EPS and DOL and EPS. The study reveals that leverage have significant impact on the profitability of the firm and the wealth of the shareholders can be maximized when the firm is able to employ more debt.

Cheng, et al. (2010) investigated the debt ratio of 650 A-Shares of Chinese listed firm from 2001 to 2006 to find out whether there is an optimal leverage at which point firm is able to maximize its value. An advanced panel threshold regression model has been applied to test the panel threshold effect of debt ratio on firm value. The results of the study confirm that a triple threshold effect does exist and show an inverted U correlation between leverage and firm value. The empirical findings show that debt have positive relation with firm value.
before reaching threshold value but beyond this level, debt will hurt firm value. The findings of the study are consistent with the Trade-off theory.

Ganguli (2010) used the data of 81 companies from 2004-2009 in an attempt to investigate relationship between capital structure and ownership structure of a firm from agency perspective in the backdrop of existing capital structure theories and empirical results. Grounded on agency theory the paper predicted that the firms with concentrated shareholding should use more debt and the ownership structure should be impacted by capital structure as well when the former is treated as endogenous. Empirical evidence on Indian companies suggested that after controlling for major determinants like profitability, risk, tangibility, growth and size, debt has a positive relationship with the concentrated shareholding and a negative relationship with the diffuseness of shareholding and profitability.

Kesternich and Schnitzer (2010) investigated how multinational firms choose the capital structure of their foreign affiliates in response to political risk. They focus on two choice variables, the leverage and the ownership structure of the foreign affiliate and they distinguish different types of political risk, such as expropriation, unreliable intellectual property rights and confiscatory taxation. In their theoretical analysis they found that as political risk increases, the ownership share tends to decrease whereas leverage can both increase or decrease depending on the type of political risk.

Miglo (2010) surveyed four major capital structure theories, i.e., Trade-off, Pecking Order, Signaling and Market Timing. Empirical evidence confirmed the main prediction of Trade-off theory that the leverage should be inversely related to the expected bankruptcy costs. The Pecking Order theory provides explanations for such phenomena as negative correlation between debt and profitability, negative share price reaction on equity issue announcements and better share price reaction on debt issues than on equity issues. Signaling theory is useful in explaining negative market reaction on a broad range of leverage-decreasing transactions and positive reaction for some leverage-increasing transactions (excluding debt issues). Evidence mostly support Market Timing theory in that managers wait until the market conditions get better and that stock have high return prior to equity issues and that prior to issue firms window-dress or improve their performance at least on paper.

Zubairi (2010) examined the data from Pakistan automobile industry over a period of eight years by using pooled data analysis to verify whether profitability of automobile sector
is related to working capital management policy and financial leverage. The study has observed positive relationship of profitability with degree of financial leverage, liquidity and size whereas degree of operating leverage has negative relation. The study has further observed that all variables are significant in determining the profitability of sample firms.

Akbarpour and Aghabeyzadeh (2011) have investigated the relationship between financial structure and accounting measurement for evaluating performance (ROA, ROE) of 101 listed firms of Tehran stock exchange over a period of six years from 2005 to 2010. The study have used three measures of financial structure and two measures for evaluating performance and used multiple regression, t and F statistics to test the empirical relations. The results of the study indicate that there is a significant relationship between financial structure and ROA but there is no significant relationship between financial structure and ROE.

Gill, et al. (2011) used a sample of 272 American firm listed on New York stock exchange for a period of three years from 2005 to 2007 to examine the effect of capital structure on profitability of the American service and manufacturing firms. The study has applied correlation and regression analysis to estimate the functions relating to profitability (measured by return on equity) with measures of capital structure. The results of the study show a significant positive relationship between short term debt to total assets and profitability and total debt to total assets and profitability in the service and manufacturing industry whereas the relationship between long term debt to total assets and profitability is significantly positive in manufacturing industry and insignificant in service industry.

Jiraporn, et al. (2011) used agency theory to investigate the influence of CEO dominance on variation in capital structure. Due to agency conflicts, managers may not always adopt leverage choices that maximize shareholders’ value. Consistent with the prediction of agency theory, the evidence reveals that when the CEO plays a more dominant role among top executives, the firm adopts significantly lower leverage, probably to evade the disciplinary mechanisms associated with debt financing. Their results were important as they demonstrate that CEO power matters to critical corporate outcomes such as capital structure decisions. In addition, they found that the impact of changes in capital structure on firm’s performance is more negative for firms with more powerful CEO’s.

Rafique (2011) investigated the effect of the profitability of the firm and its financial leverage on the capital structure of the automobile sector companies in Pakistan. To proceed
with this, the capital structure of 11 listed firms has been analyzed by adopting an econometric framework over a period of five years. Estimating regression analysis and checking the relationship of the estimated model through Correlation Coefficient test, the study concluded that profitability in strongly negatively related to capital structure and positively to financial leverage but the correlation coefficient was insignificant. Hence, the study fails to establish any significant relation between profitability and financial leverage effect on the capital structure for the sample firms.

Saleem and Naseem (2011) analyzed the leverage and profitability of selected oil and gas companies of Pakistan during 2004 to 2009 to understand the impact of leverage on profitability and EPS. The study failed to support the hypothesized positive relationship between financial leverage and both of the profit measures. Hence, the study found negative relationship of leverage to profitability and earnings per share. The results also indicated that high levered firms were less risky in both market based and accounting based measured.

Shubita and Alsawalhah (2012) seeks to extend the Abor’s (2005) finding regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the industrial companies of Jordan. The study sample consists of 39 companies over a period of six years from 2004 to 2009. The result of study reveals significant negative relation between debt and profitability. The findings of the study suggested that profitable firm depend heavily on equity as their main source of financing.

2.3 SUMMARY AND RESEARCH GAP

A number of empirical studies have been reviewed to have in-depth knowledge of research topic. A perusal of review of literature brings home the fact that a number of studies on different aspects of capital structure have been conducted both in India as well as abroad. More than ninety studies have been reviewed that was conducted in India and abroad. Out of these, around sixty studies are regarding determinants of capital structure and some studies are explaining the relationship among capital structure and profitability and other studies are reviewed which identifying the relationship between capital structure and cost of capital and the remaining studies are about theoretical framework. These studies have been reviewed critically with a view to understand the objectives, research methodology, research findings etc. and to identify the research gap. The literature survey indicates that majority of the studies were conducted to identify the significant determinants of capital structure. Most of the research studies have used four to seven independent variables as determinants of capital
structure. The need has been felt to include more independent variables to widen the horizon of capital structure in Indian corporate sector. Secondly, majority of the studies in the literature have used single model (multiple regression or pooled regression) to identify the determinants of capital structure. Further, a very few number of empirical studies has used appropriate model satisfying the requirements of the data. Above all, no study has been conducted so far to compare the capital structure practices of traditional and modern industries. Hence, there exists a research gap and the present study entitled “Capital Structure Practices in Indian Corporate Sector” is an attempt to fill this gap.