Chapter II

Review of Literature
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REVIEW OF LITERATURE

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2.1 INTRODUCTION

The capital structure decision, related to the choice of debt and equity, is a significant financial decision for the corporate firms, in that, it influences both the return and risk of shareholders. A firm may decide to finance its investment requirements through either equity only or through debt only or a mixture of both. Normally a firm follows a third option. Consequently, the balance sheet of the firm contains both equity and debt as source of funds. The challenge before the economists and researchers in finance is to determine the optimal mix of equity and debt that a firm should really have. Indeed, the debate about structure and value is often referred to as the capital structure puzzle, a puzzle, which to date, remains unsolved. Researchers in the area of corporate finance are still struggling to develop a universally acceptable model that would help firms in designing their target capital structure. The task has been made more difficult by the proponents of different (and at times almost diametrically opposite) theories of capital structure. Therefore, before making a review of the previous studies it is essential to take a short look into various theories of capital structure.

2.2 THEORIES OF CAPITAL STRUCTURE

Theories of capital structure, as they stand now, can be classified into four broad categories.

2.2.1 Theory of Irrelevance

The first theory, the theory of irrelevance, was developed by Modigliani and Miller. They argue that capital structure is "irrelevant" in the sense that it has nil or insignificant impact on the value of a firm. They maintain that operating assets and intangibles that a firm possesses and not how these
assets are financed, drive the value of a firm. The only benefit of debt, Modigliani and Miller admit, lies in the tax shield that debt enjoys. Therefore, according to them, value of a levered firm is different from the value of an unlevered firm only to the extent of tax shield on debt.

2.2.2 Optimal Capital Structure Theory or Contracting Costs Theory

The second theory proposes that the capital structure of a firm is the result of a trade-off between debt and equity. Corporate financing choices reflect an attempt by corporate managers to balance the tax shields of greater debt against the increased probability and costs of financial distress. According to the theory, too much debt or too little debt are both bad for corporate health. Too much debt creates the problem of under investment, while too little debt invites that of over investment and consequently, results in low returns on invested capital. Agency costs arise owing to too little debt in the capital structure. Michael Jensen believes that agency cost is high in the case of low levered firms. Debt, Jensen asserts, disciplines management and hence a firm with a relatively higher dosage of debt would not normally spend free cash in value-destroying projects. In fact, managers would have less discretionary free cash in that scenario. Thus, optimal capital structure theory suggests that the value of a levered firm increases due to tax shield on borrowings, but at the same time decreases due to expected bankruptcy costs associated with too much debt. The optimal capital structure is that combination of debt and equity which maximises the value of the firm.

2.2.3 Signaling Theory

The third theory presupposes that corporate managers have better information about their firms than outsiders do and hence their financing decision would give a 'signal' to the outside investors about the insiders' perception of corporate value. If the managers consider their firm to be under-valued in the market, they would issue debt to raise fresh external finance and thereby, give a signal that the firm is confident about its future
cash flows. On the other hand, if the managers believe that the market has currently over-valued their firm, they would decide to issue equity at the current higher price. Signaling theory, therefore, suggests that firms are more likely to issue debt than equity when they are under-valued.

### 2.2.4 Pecking Order Theory

The fourth theory, which is a variant of signaling theory, was put forward by Stewart Myers. According to him, corporate managers do not think about any optimal capital structure while making financing decisions. What managers follow is a commonsense approach and choose the 'cheapest available' source of funds with little thought about the possible consequences of choices. According to this theory, internal accruals are utilised first without resorting to external financing and if external financing is required, equity is used as the last resort. Pecking order theory also suggests that issuing equity has a higher information cost and hence should be resorted to only as the last choice. Thus, according to Myers, firms with large free cash flows should have lower leverage ratio. In the pecking order hypothesis, Myers and Majluf have argued that firms prefer safer debt to riskier ones. Though it is not clearly mentioned, an offshoot of their argument is that firms also prefer riskier debt to equity. This is because the theory is based on asymmetric information assumption and it believes that management will issue those securities that are not affected by the information asymmetry.

In tune with these divergent capital structure theories, many researchers have already contributed either in conformity or against these theories. Therefore, this chapter has been dedicated to present a glimpse of the earlier studies.

### 2.3 REVIEW OF PREVIOUS STUDIES

Chudson had provided direct evidence on the companies with a high proportion of fixed assets tending to use more long-term debt. His research
also indicates that there is no simple linear relationship between corporate size and debt ratio.

Donaldson\textsuperscript{11} reported that practically the corporates behaved as if they followed some sort of a pecking order while designing the capital structure of the companies. In a field survey of corporate debt policies, Donaldson met finance managers who acknowledged that, "it was their long-term objective to hold to a rate of growth which was consistent with their capacity to generate funds internally".

Gordon\textsuperscript{12} found that gearing increased with size and that the return on investment was negatively related to debt ratio. He confirmed the negative association between operating risk and debt ratio.

The study made by Sastry\textsuperscript{13} on the basis of individual balance sheets of public limited companies (for the period 1955-60) was a major attempt to analyse investments, dividends and external financing and their interdependence. Sastry's model, while explaining external financing in relation to gross retained earnings, investment and stock of net debt, indicated "external finance to be negatively sloped function of stock of net debt and gross retained earnings and a positively sloped function of investment outlays".

Baxter\textsuperscript{14} reported that leverage depended on the variance of net operating earnings. Since business units with relatively stable income streams are less subject to the possibility of ruin, they may find it desirable to rely relatively heavily on debt financing. On the other hand, firms with risky income streams are reluctant to assume fixed charges sources of finance. Hence he concluded that there was negative association between variance of net operating earnings and leverage.

Bray\textsuperscript{15} observed that risky firms were more likely to have lower debt ratio. He observed that there was no simple linear relationship between size and debt ratio. Further, he found a negative association between total debt
and the proportion of fixed assets. Apart from the factors mentioned above, he also concluded negative relationship between return on investment and debt ratio, finally debt ratio being positively related to assets turnover and negatively related to pay out.

Schwartz and Aronson\textsuperscript{16} investigated the effect of one factor viz., industry on the firm's financial structure. They examined the hypothesis that financial structure measured by book values did not vary significantly within an industry but did vary significantly among industries. The statistical technique employed was the one way ANOVA, which used the 'F' ratio test of statistical significance. Their results were significant and they concluded that industries had developed optimal financial structures conditioned by their interact business risk. The rationale for this is that, firms in the same industry face the same kinds of environment and economic conditions and therefore, tend to cycle together.

Gupta\textsuperscript{17} conducted a study on the financial structure of American manufacturing enterprises. The focus of the study was an analysis of the effects of industry, its size and growth on the financial structure relationship of American manufacturing enterprises. The study confirmed that total debt ratios were positively related to growth and negatively related to size. He also found significant industry - effect on debt ratio. He further observed that family pattern of ownership is an important determinant of leverage in the paper and allied product industry.

Lev\textsuperscript{18} concluded that there was a significant relationship between industry class and debt ratio.

Baxter and Cragg\textsuperscript{19} have analysed 230 security issues made in 1950 - 65 using logit and probit analysis and the explanatory variables were selected partly on prior grounds and partly by trial and error. Their final model, for example, contained 11 independent variables, but atleast 79 others were examined. Their study revealed two aspects : first, companies raising large
sums in relative terms favoured debt. Possibly this reflects concern over control. Secondly, companies with high ratios of market capitalisation to total assets favoured equity. This could reflect timing consideration.

Krishnamurty and Sastry\textsuperscript{20} estimated the external finance equation to be very similar to the one estimated by Sastry in capital goods industry. The main findings of this study were that, "retained earnings exert their influence on investment when the supply of funds is limited on account of past profit" and "the impact of external finance is felt on investment when money and capital markets are tight".

Scott\textsuperscript{21} presented an article on the importance of financial structure. The objective of his study was to present evidence on whether financial structure of the firm had, in practice, been confirmed by corporate decision makers. It was found that the financial structure of firms in the various industry classes was significantly different, underlining the importance of the financial structure of the firm.

Remmers et al.\textsuperscript{22} took up a study on "Industry and size as debt ratio determinants in manufacturing internationally". They examined a sample of four manufacturing industries in five developed countries, namely France, Japan, Netherlands, Norway and United States. They observed that two determinants, namely, industry and size, believed to influence corporate financial structures, probably did not warrant the credence they received. Thus, while they accepted that industry and size did influence capital structure, it was the case not always, they concluded that certain other variables such as earnings rate, growth rate, etc., seemed to be more important determinants of debt ratios internationally.

Toy et al.\textsuperscript{23} reported that higher operating risk companies showed some tendency towards higher debt ratio. They found that debt ratios were positively related to growth, typically measured as sales growth and return on investment to be negatively correlated with debt ratio. They were also of the
view that the corporation size and the industry class did not appear to be determinants of debt ratio.

Stonehill et al.\textsuperscript{24} conducted a survey of financial executives in 87 firms of manufacturing corporations in France, Japan, Netherlands, Norway and the United States on the corporate financial goals and debt ratio determinants. They concluded that financial risk appeared to be the most important debt ratio determinant. Coverage of fixed charges under various cash flow forecasts ranked first in the Netherlands, Norway and the United States, third in Japan and seventh in France. Almost equally important was the availability of capital. Capital market conditions during the survey period (1966 - 70) were the most important debt ratio determinants in France. Historical capital market opportunities to issue either debt or equity ranked first in Japan, second in France and third in Norway. Rate of growth and variance in earnings were second most important in Japan and third most important in the Netherlands. Finally, according to them, the industry norm did not appear to be an important debt ratio determinant in any of the countries surveyed.

Taub\textsuperscript{26} used logit analysis to examine 172 issues of equity and bonds made in 1960 - 69 with the help of certain explanatory variables. He concluded that uncertainty of earning variable was negative, although not significant. The size of the firm had a positive impact on the desired debt - equity ratio. The tax rate was found to be negatively associated with debt - equity ratio. The estimated co-efficient of the period of solvency variable was negative. Finally, the co-efficient of debt - equity ratio was negative but not significant.

Swamy and Rao\textsuperscript{26} in their study observed that 'availability' rather than the 'cost' of funds determines the pattern of corporate finance.

Krishnamurthy and Sastry\textsuperscript{27} tried to measure the relationship between net flow of debt and gross fixed assets. The explanatory variables they used were gross retained earnings representing internal resources, investment
outlays representing the demand for funds and the stock of net debt representing the risk factor. It was found in this study, that co-efficient of the stock of net debt was negative for all the seven sample industries studied and was significant for five industries, namely, jute, sugar, paper, chemicals and engineering. The study further revealed that the impact of retained earnings on the flow of external finance was negative and significant in all the industries.

Brealey et al.\textsuperscript{28} reached the conclusion that higher operating risk companies tended to avoid long-term debt issues. They found that larger UK companies had more long-term debt.

Schmidt\textsuperscript{29} observed that there was a significant industry effect on debt ratio and that the return on investment was negatively associated with the debt ratio. He looked at the composition of debt and found that large companies had more long-term debt than small companies. Finally, Schmidt found a negative correlation between total debt and the proportion of fixed assets.

Melicher et al.\textsuperscript{30} had shown that firms operating in the most highly concentrated industries were able to achieve substantially higher rates of return on book equity capital. While linear relationships between equity returns and concentration ratios are tenuous, the results support the existence of an 85 per cent 'threshold' concentration level above which there may be certain operating advantages. Higher equity returns were found to be primarily the result of higher operating profitability and not a result of differences in financing characteristics. Financial structures were not significantly different when examined across concentration ratio groups.

Carleton and Silberman\textsuperscript{31} have concluded that the higher the variability in rate of return on invested capital is, the lower will be the degree of financial leverage adopted. Hence it is the variance, not the rate of return, that is the
ultimate determinant of leverage. They have also found the return on investment to be negatively correlated with the debt ratios.

Venkatachalam and Sharma\textsuperscript{32} found 'cost of credit' to be the determining factor for the volume of borrowing from commercial banks by the private corporate sector. Their finding is in direct contrast to the conclusion of Swamy and Rao, that it is the availability of finance, rather than the cost of credit that affects the pattern of corporate finance.

Ferri and Jones\textsuperscript{33} undertook a study entitled, "Determinants of financial structure : A new methodological approach" by taking a sample of 233 SIC (Standard Industrial Classification) code firms. The objectives of the study was to 'investigate the relationship between a firm's financial structure and its industrial class, size, variability of income (i.e., risk) and operating leverage. The study was concluded with the following observations :

i. Industry class is linked to a firm's leverage, but in a less pronounced and direct manner than has been previously suggested.

ii. A firm's use of debt is related to its size but the relationship does not conform to the positive, linear scheme that has been indicated in other researches.

iii. Variation in income, measured in several ways, could not be shown to be associated with a firm's leverage and

iv. Operating leverage does influence the percentage of debt in a firm's financial structure and the relationship between these two types of leverage is quite similar to the negative, linear form, which financial theory would suggest.

Errunza\textsuperscript{34} conducted a study on the determinants of financial structure in the Central American Common Market (CACM) countries. This study supports the hypothesis that there are statistically significant differences in the financial structures of different industries in the CACM countries.
Such variations have persisted over a reasonable time span. The effect of country-factor is not as strong as the industry-classification.

Bhat\(^{36}\) in his study on the "Determinants of financial leverage" observed that (a) a firm's financial leverage was not associated with its size; (b) the negative relationship between financial leverage and coefficient of variation in EBIT showed that risky firms were more likely to employ low percentage of debt in their financial structure; (c) the firm's growth rate did not seem to be associated with the firm's leverage and the relationship did not turn out to be positive as indicated in other works; (d) there was negative relationship between dividend payout and leverage ratio, though cause and effect relationship between them was not clear; (e) the earnings rate was negatively related with leverage; (f) the degree of operating leverage did not influence the use of debt, and (g) the financial leverage and debt service capacity have been found to be negatively related.

Marsh\(^{36}\) has revealed that the companies have been heavily influenced by market conditions and the past history of security prices in choosing between debt and equity. He has provided evidence that companies appeared to make their choice of financing instruments as though they had target levels of debt in mind. Finally, the results were consistent with the notion that these target levels were themselves a function of company size, bankruptcy risk and asset composition.

Bower et al.\(^{37}\) carried out "Pioneering work in the area of determining an optimal capital structure". The object of his study was to provide additional evidence on the relationship between leverage and industry classification cross-sectionally and across time, as well as, to test empirically the role of non-cash shelters. They concluded that there were statistically significant differences among mean industry financial structures. The ranking of mean industry financial structures demonstrated a statistically significant stability over the entire time period studied and firms showed a tendency to move towards their industry mean over both five and ten year periods.
Ultimately, they confirmed that the level of tax shelters played a significant role in determining the optimal use of debt in capital structure.

Venkatesan attempted to study the relationship of seven different variables to the financial structure of firms. These included industry categorisation, size, operating leverage, debt coverage, cash flow coverage, business risk and growth ratio. Industry influence was examined on the grouping of firms in various leverage classes and he found a statistical relationship between industry - class and leverage, but the relationship might not be significant and conclusive. The impact of remaining independent variables on the dependent variable was examined in two sample - classifications, namely, intra - industry and inter - industry through multiple regression analysis. In short, only debt coverage ratio was found to be the important variable significantly affecting the financial structure of firms.

Pandey carried out a study on 743 companies classified into 18 industrial groups for the period 1973 - 74 to 1980 - 81 and examined the relationship between leverage, on the one hand, and size, industry, profitability and growth on the other. He observed that the highly favourable attitude of the corporate managers towards the use of leverage was borne out by the very high level of debt employed by the Indian Corporate Sector. The study revealed the tendency of large size companies to concentrate in the high level leverage class. But it was difficult to say conclusively that the size had an impact on the degree of leverage since the analysis revealed that a large number of small companies also employed high level of debt. The study also does not indicate a definite structural relationship between the degree of leverage on the one hand, and profitability and growth on the other. According to Pandey, although over the period, profitability and growth had improved, thus having the degree of leverage, yet a majority of the profitable and growth oriented groups of companies which concentrated within the narrow bonds of leverage.
Sharma in his study on "corporate financial structure" concluded that the Indian automobile industry had followed the policy of trading on equity for the benefit of the shareholders. He further observed that the common size percentage of fixed asset has always been higher than the percentage of net worth.

David et al. examined the effect, on firm value, of a tax feature of debt financing that is separate from and independent of the tax treatment of coupon interest payments and receipts. The presence of long-term debt in a corporation's capital structure is shown to give rise to a valuable tax-timing option that can be exercised by the firm on behalf of its shareholders. This option, which is not available, if the firm is fully equity financed, implies that leverage will have a positive tax effect on total firm value even if there is no such effect associated with the tax deductibility of the coupon interest payments on debt. They concluded that the more the volatile interest rates and bond prices are, the more valuable the tax timing option, and the larger the favourable impact of debt on shareholder wealth.

Blazenko was of the opinion that if the firm's performance affects managers' wealth or reputation, preferences of managers dominate firm's financing decisions. When information about real asset investment was symmetric, managers financed exclusively with equity. If managers knew more about asset quality than did investors and if managers were sufficiently risk-averse, they signalled high-quality projects with debt. Blazenko reported that increases in collateral value decreased risky debt use and increases in interest rates that did not change productive opportunities, increased debt use. The explanation for these was based on under-pricing of equity and over-pricing of debt at the margin.

Titman and Wessels report that the firms with unique or specialised products have had relatively low debt ratio. Uniqueness has been categorised by the firm's expenditure on research and development, selling expenses and the rate at which employees voluntarily leave their jobs. They also find that
smaller firms have tended to use significantly more short-term debt than larger firms. Their model finds no evidence to support theoretical work which predicts that debt ratio is related to a firm's expected growth, non-debt tax shields, volatility or the collateral value of its assets. They, however, find some support for the proposition that profitable firms have relatively less debt relative to the market value of equity.

Gangadhar in his study on "Financial trends in the Indian corporate sector", observed that in medium and large companies, debt forms a significantly higher proportion of the total capital structure when compared to small companies.

Rao conducted a research on "Debt-equity analysis in chemical industry". He observed significant negative correlation between age and debt-equity ratio with the indication that possibly younger age of chemical companies tended to be associated with a higher debt-equity ratio. The negative correlation between retained earnings and the debt equity ratio indicated that a company with a higher volume of retained earnings had a low debt-equity ratio. He also observed that in case of high debt-equity ratio, the profitability declined, due to large payment of interest. However, he noted a positive correlation between debt-equity ratio and the size measured in terms of total assets. Besides, he also examined the trends and patterns of the debt-equity ratio.

Barton et al. claim that, "firms with closely related products markets and technologies tend to have lower debt ratios than firms with unrelated businesses".

Baskin's empirical study of the pecking order hypothesis finds the evidence that "... debt leverage varies positively with past growth and inversely with past profits. In addition, it is found that firms which paid higher dividends in the past, tended to borrow more".
Mathew has made an attempt to analyse the relationship between ownership structure and financial structure with a view to knowing whether the former has any impact on the latter. His analysis was based on three hypothetical relationships that existed between ownership structure on the one hand, and unsystemic risk, non-manufacturing expenses and profit appropriate policies on the other, and their impact on the firm's financial structure. He concluded that, where the management stake is high, the leverage is low and vice-versa and that there exists a significant relationship between ownership structure and financial structure of firms.

Harris and Raviv have listed the following empirical implications of the pecking order hypothesis. They are of the view that new projects will tend to be financed more through internal sources than through external sources. If a firm has to rely on external source, then it will prefer low risk debt to high risk debt or equity and high risk debt to equity. Finally, firms with less information asymmetry problem will have less debt than firms with more information asymmetry problem. There are many proxies used for information asymmetry. One of them is the ratio of the market value of the company and the total tangible assets. The value of a company has two components - first, the value due to the assets in place and the second is due to the growth opportunities the firm enjoys. The information asymmetry problem arises mostly due to the second component of the value of the company. Hence, if the above mentioned ratio is high, it means that the information asymmetry problem is very severe and one should expect a high debt to equity ratio.

Jahera and Lloyd conclude that, of the two factors viz., past dividend pay out and degree of diversification achieved, the latter is the more influential factor affecting a firm's leverage.

Berens and Cuny have observed that the high growth companies have a low debt to equity ratio. Growth companies are usually the ones that have a high ratio of value to total tangible assets. Growth companies also, generally, spend a large amount of money on research and development.
Hence Berens and Cuny's conclusions may be looked upon as contradictory to the conclusions of Myers.

Mauer et al.\textsuperscript{62} analysed the interaction between a firm's dynamic investment, operating and financing decisions in a model with operating adjustment and recapitalization costs. Using numerical analysis, they found that higher production flexibility (due to lower costs of shutting down and re-opening a production facility) enhances the firm's debt capacity, thereby increasing the net tax shield value of debt financing while higher financial flexibility (resulting from lower recapitalization costs) has a similar effect, production flexibility and financial flexibility are, to some extent, substitutes. The impact of debt financing on the firm's investment and operating decisions is found to be economically insignificant.

Goswami et al.\textsuperscript{53} analysed the optional design of debt maturity, coupon payments and dividend payout restrictions under asymmetric information. They showed that if the asymmetry of information is concentrated around long-term cash flows, firms finance with coupon-bearing long-term debt, that primarily restricts dividend payments. If the asymmetry of information is concentrated around near-term cash flows and there exists considerable refinancing risk, firms finance with coupon-bearing long-term debt that does not restrict dividend payments. If the asymmetry of information is uniformly distributed across dates, firms finance with short-term debt.

Rajan and Zingales\textsuperscript{64} investigated the determinants of capital structure choice by analysing the financing decision of public firms in the major industrialised countries (called G.7 – The United States, Japan, Germany, Italy, The United Kingdom and Canada), covering the period from 1987-91 using different measures of leverage and correcting the data for major differences in accounting. Their study concentrated on identifying and explaining (1) between country differences in capital structure and (2) cross sectional differences between firms in a country. They concluded their study with the following observations: (i) The United Kingdom and Germany have
the lowest leverage among G.7 countries, (ii) All other countries have approximately the same amount of leverage, (iii) The differences in institutions seem to have some power in explaining differences in aggregate capital structure of companies in G.7 countries. The tax code, bankruptcy laws, the state of development of bond market and patterns of ownership may also matter and (iv) Leverage is cross sectionally correlated with four factors viz., tangibility of assets (the rates of fixed to total assets), the market-to-book ratio (usually thought of as a proxy for investment opportunities), firm size and profitability. This holds good to United States and seems to be related to other countries also. They also suggested that a deeper understanding of the effects of institutional differences will result in identifying the fundamental determinants of capital structure.

Kotrapa reported that due to increase in cost of equity, Indian corporations were reluctant to mobilise their long-term finance through the issue of equities, in spite of very good public response. A specialised financial institution was the only source of the much sought-after debt capital for corporations, as public response for debenture issues turned out to be poor due to sharp decline in the after-tax real (after deducting inflation component) yield to the debt investor. There has been an alarming shift in the debt-equity composition in Indian corporations. While the role of equity capital as a source of long-term finance declined over the years, dependence on debt capital increased substantially, with the result that capital formation is characterised by capital gearing.

Lang et al. in his “study on leverage, investment and firm growth” reported that there is a negative relation between leverage and future growth at the firm level and for diversified firms, at the business segment level. This negative relation between leverage and growth holds for firms with low Tobin's 'q' ratio but not for high 'q' firms or firms in high 'q' industries. Therefore, leverage does not reduce growth for firms known to have good investment opportunities, but is negatively related to growth for firms whose
growth opportunities are either not recognised by the capital markets or are not sufficiently valuable to overcome the effects of their debt overhang.

Guedes and Opler\textsuperscript{57} documented the determinants of the term to maturity of 7369 bonds and notes issued between 1982 and 1993. They have found that size and bond ratings are important determinants of a firm's propensity to borrow long-term. Large firms with investment grade credit ratings typically borrow at the short end and at the long end and of the maturity spectrum, while firms with speculative grade credit ratings typically borrow in the middle of the maturity spectrum. This pattern is consistent with the theory that risky firms do not issue short-term debt in order to avoid inefficient liquidation but are screened out of the long-term debt market because of the prospect of risky asset substitution.

Gilson\textsuperscript{58} investigated the impact of transaction costs on leverage choices by financially distressed firms. The analysis was based on a sample of 108 publicly traded firms that contracted with their creditors during 1980-89, either by recognising them under chapter 11 of the U.S. Bankruptcy code, (51 firms) or by restructuring their debt out of court (57 firms). The leverage ratios generally remain quite high after financially distressed firms recontract with their creditors. Leverage ratios remain highest for firms that restructure their debt out of court because of high transaction costs associated with the reduction of debt or issue of equity. The analysis further suggests that the expected costs of financial distress may be much higher when a firm's experience with debt is properly viewed over a longer horizon. Evidence in this study suggests that, to avoid being locked into high leverage, managers should plan ahead for the possibility of financial distress by maintaining a capital structure that can be restructured at relatively low cost.

Chandra\textsuperscript{59} has given some evidence on pecking order hypothesis. He has reported the findings of a survey conducted by him in his famous book, "Financial management : Theory and practice". He has reported the
preference of industries towards internally generated funds to debt and also provided evidence for the preference of industries towards debt, when their projects were good.

Kamath\textsuperscript{60} examines survey evidence on managerial views and practices with respect to long-term financing decisions. The sample studied is made up of NYSE-listed firms, excluding the fortune 500 firms and financial intermediaries. The message conveyed by the managers of the sample firms is that they are likely to be much more flexible with the capital structure decisions than with either the dividend policy decisions, or with the management decisions. The firms which attempt to maintain target capital structures are found to view the respective industry average debt ratios as playing an important role in determining their debt ratios. The firms which follow financing hierarchies in raising new capital, view their debt ratios as being dependent on their firms past profits and growth.

Kunt and Maksimoric\textsuperscript{61} using a sample drawn from thirty developing and developed countries, explored the link between financial markets and institutions and a firm's ability to obtain debt and equity financing. Their results show that both an active stock market and a well-developed legal system are important in facilitating a firm's growth. Firms in countries that have active stock markets and high ratings for compliance with legal norms are able to obtain external funds and grow faster. They also find that the reported return on capital is lower in countries with active stock markets and well-functioning legal systems. Thus, developed institutions not only permit firms to fund growth externally, but also may indirectly increase dependence on external financing by reducing the firms' profits.

Sarig\textsuperscript{62} states that the capital structure choice of a firm affects the bargaining posture of its shareholders vis-à-vis its suppliers of specialised production factors. The pricing of the firm's securities and choice of a capital structure are analysed in the light of this effect of debt financing.
Moh'd et al. examined the influence of agency costs and ownership concentration on the capital structure of the firm. A model was constructed to test the effect of ownership structure on corporate debt policy, taking debt ratio as the dependent variable, while the explanatory variables included ownership structure, dividend, payments, growth opportunities, firm size, asset structure, asset risk, profitability, tax rate, non-debt tax shield and uniqueness. The results showed that the tenets of agency theory appear to hold not only across firms, but also within firms across time. Managers act to adjust the capital structure of firms in response to variations in the agency cost structure in a dynamic manner. Further, it appears that the structure of equity ownership is important in explaining the overall capital structure of a firm. As managerial ownership increased, raising the amount of personal wealth and human capital invested in the firm, managers tended to lower debt to reduce their overall risk and/or agency costs. Institutional shareholdings also appear to influence the financial policies of the firms, with institutional holders substituting for the disciplinary role of debt in the capital structure. The result also suggests that capital structure models which do not include the impact of agency costs, or their effect through time may be incomplete.

Babu and Jain report that corporate firms in India are now showing an almost an equal preference for debt and equity in designing the capital structure. Freedom in paying dividends and easy-to-raise money are the reasons cited for equity preference. Moreover, due to increasing competition, returns have become uncertain. Hence, companies will not prefer debt over equity, though debt is a cheaper source of finance than any other, owing to tax advantage.

Sureshbabu in his study on "Capital structure practices of private corporate sector in India", analysed the corporate debt practices, using a sample of 527 corporate firms for a period of fifteen years (1980-94). His study indicated that the private corporate sector in India showed a marked preference for debt in designing their capital structure and there was a shift towards preference for long-term debt in lieu of the short-term debt.
He observed that the nature of industry played an important role in the design of capital structure. While manufacturing industries namely cement, paper, electronics, textile and metal group of industries, had a debt dominated capital structure, agro based industries (tea and coffee, plantations and sugar) showed an equity oriented capital structure. His study revealed that financial risk, operating risk, debt service capacity and size of the firm were some of the important and major parameters in designing capital structure of the private corporate sector in India.

Kakani\textsuperscript{66} attempted to find the determinants of the capital structure and its maturity in India. He reported that the results of his study were found to be fairly different from the empirical findings done in the developed countries, such as Titman and Wesselo, Barton and Gordon and Barclay and Smith in many aspects. A firm’s diversification strategy and size were found to be of no significance in deciding the leverage level of the firm. His study demonstrated that liberalisation of the Indian economy appeared to have affected the determinants of capital structure and profitability, capital intensity and non-debt tax shields seemed to be important determinants of capital structure of the firm.

Krishnaswami et al.\textsuperscript{67} examined the impact of flotation costs, agency conflicts, regulation and information asymmetries of a firm’s debt financing, which is a mix between public and private debt. His sample included 297 publicly traded firms in the USA over the time period 1987-93. The results indicated that firms with larger issue sizes exploited the scale of economies in inflation costs of public debt. Firms with higher contract costs, due to moral hazard, had higher proportions of private debt. They found little evidence that firms with favourable private information about future profitability choose more operating private debt. However, those firms with favourable information about future profitability, under greater information asymmetry rely more on private debt.
Gul68 aims to explain capital structure in terms of agency theory and asset structure as represented by growth opportunities. The idea is that the higher the fraction of a firm's value is, which is represented by growth opportunities rather than by assets in place, the lower should debt represent in its capital mix. This inverse relationship between growth and debt is driven by agency costs of debt namely, under-investment and asset substitution. Indeed evidence is found to show that the capital structure decision is influenced by growth opportunities and that due to agency costs, firms with lower levels growth tend to be more highly geared.

Mohapatra69 in his study on financing pattern of large public limited companies in India, covering a period of 23 years (1970-71 to 1992-93), observed that the need for long-term, short-term and external funds and the generation of internal surplus depend upon the type and nature of industries. His econometric analysis leads to the conclusion that external financing and size are the most significant factors which influence, to a great extent, the financial structure of large public limited companies in India, followed by income gearing, operating leverage, profitability and the pay out ratio.

Chen and Steiner70 argue that the presence of a few large external shareholders in a firm may prevent owner-managers from adjusting debt ratios to suit their own interests. Large external shareholders, by acting as monitors, help to lower some of the agency problems of debt financing. Thus, such firm should have a higher level of debt than those firms with no large external shareholders. Alternatively, large external shareholders may act as a signal to the market that managers are less able to engage in profit reducing activities, thereby mitigating the need for debt to be used as a signal of firms' quality.

Mohanty71 made an attempt to see if the various theories of capital structure developed by Myers (1984), Myers and Majlitz (1984) and Ross (1977) hold in the Indian conditions, that is, whether models based on asymmetric information approach explain capital structure of Indian
companies. It has been found that some of the predictions made by these theories appear to hold in the Indian context. Particularly, it has been found that leverage is negatively related with profitability both within an industry, as well as, within the economy. However, contrary to the predictions made by these theories, it has been found that companies that spend a larger sum of money on advertisement and research and development expenditure, are the least levered. Similarly, companies where the ratio of value to total tangible assets is less, are found to be more levered.

Booth et al.\textsuperscript{72} analysed capital structure choices of firms in 10 developing countries and provided evidence that these decisions were affected by the same variables as in developed countries. The three dependent variables identified by them were total debt ratio, long-term book-debt ratio and long-term market debt ratio. Business risk, asset tangibility, size, return on assets and markets, book ratio were the independent variable taken up for their study. A consistent result in both the counting and pooled data results was that, the more profitable the firm was, the lower was the debt ratio, regardless of how the debt ratio was defined. However, there were persistent differences noted across countries, indicating that specific country factors were at work.

Vilasuso and Minkler\textsuperscript{73} link the capital structure decision to agency theory and to asset structure, where the latter is measured in terms of assets specificity. They argue that a project that requires highly specific assets will initially be financed by equity. However, as the debt to equity ratio decreases, in line with agency theory, the cost of debt falls, while the cost of equity rises. These agency cost effects become increasingly more important until debt finance becomes the preferred form of financing. A crucial point in Vilasuso and Minkler is that, when assets are highly specialised, it takes longer for agency cost considerations to dominate. Thus, while minimisation of total agency costs ensures that in the long-term firms will move towards their optimal financing mix, for those with highly specific assets, this optimal mix contains more equity.
Narasimham and Vijayalakshmi found that debt ratio is positively influenced by collateral value and negatively influenced by profit while collateral value and earnings risk continued to show a strong relationship with debt ratio. Neither promoters holding nor institutional holding show an association with leverage. The absence of association, according to them, can be attributed to general preference of debt by the Indian firms, inadequate bankruptcy laws, inactive take over market, less developed primary market and changes in tax laws relating to dividend.

Rachel Nancy Philip in her study on “Capital structure and Shareholder value : An empirical study of corporate firms in India” reported that the debt - equity ratio and Economic Value Added (EVA) were inversely related due to higher average cost of equity for Indian firms. Further, risk and growth factors had significant discriminating influence on capital structure.

2.4 CONCLUSION

From the foregoing discussion, it can be concluded that the preference of industries to a particular source of finance varies from time to time due to several factors, which include size of the firm, chances for further growth, cash flow generations and other external environmental factors. There is no unanimity among the researchers on the determinants of capital structure or debt - equity mix or financial leverage. Marsh and Chudson conclude that assets composition is positively associated with debt - equity ratio, while Schmidt and Bray found negative relationship. Scott and Martin, Ferri and Jones, Marsh, Taub conclude that corporate size is the determinant of a firm's debt - equity ratio. On the contrary, Remmers, et al., Toy et al., Bray, Chudson, Bhat and Pandey conclude that size of the company does not appear to be a determinant of debt - equity ratio. Similarly, Toy et al., found that business risk is positively related to debt - equity ratio, Bray, Gordon and Baxter found a negative relationship and Titman and Welselo, and Ferri and Jones observed that business risk was not related to a company's financial leverage. Similar differences of opinion are noted regarding other variables.
The present study has been taken up in the light of various reforms in the capital market due to trade and financial liberalisation introduced in India since 1991. The study covers a period of 11 years from 1991 - 92 to 2001 - 02 and is based on a sample of 271 firms covering a wide spectrum of 12 industries in the Indian private corporate sector. Attempt has been made to analyse debt-equity structure of the select industries using descriptive statistics namely, mean, standard deviation, coefficient of variation, skewness and kurtosis. The extent of financial leverage and financial risk of industries has been analysed using leverage ratios, drawn from the capital structure literature and based on in particular on Rajan and Zingales (1995). Analysis of determinants of financial leverage included the following variables namely, effective tax rate, non-debt tax shield, size of firm, business risk, growth rate, earnings rate, dividend pay out ratio, interest coverage ratio, capital intensity and collateral value of assets. These variables have been examined using correlation analysis and multiple regression analysis (step reduction method). Besides, studying the impact of debt on return on equity and market price of shares also has formed part of the study.
REFERENCES


5. Ibid, 339.


8. Ibid, 592.


