CHAPTER-II

REVIEW OF LITERATURE

INTRODUCTION

It is interesting to note that the empirical literature on capital structure is very vast and exhaustive at the international level and it is very much sporadic at the Indian level. Hence the review of literature has been presented below under International Studies; and Indian Studies.

2.1 INTERNATIONAL STUDIES

The empirical research on capital structure at international level has been presented under: (i) Macroeconomic conditions; (ii) Corporate taxation; (iii) Factor market structure; (iv) Ownership structure; (v) Firm performance; (vi) Behavioral corporate finance; (vii) Equity market timing; (viii) Institutional characteristics; (ix) Multinational corporations (MNCs); (x) Internationalization of business; (xi) Nature of industry; (xii) Technical change; (xiii) Investment effect; (xiv) Firms’ histories; (xv) Investor protection; (xvi) Credit ratings; (xvii) Competition and regulatory changes; (xviii) Political patronage; and (xix) Equity market liquidity; (xx) Corporate governance; (xxi) Dividend decision; (xxii) Asymmetric information; (xxiii) Business risk; (xxiv) Agency cost; (xxv) Tangibility; (xxv) Tax benefit.

(i) Macroeconomic Conditions:

Despite the substantial literature developed in the field of capital structure, it is surprising that little attention has been paid to the impact of macroeconomic conditions on firms' capital structure adjustment speed since adjustment costs are largely determined by the combination of general economic conditions and firm specific characteristics. Macroeconomic conditions have been found to be important factors in analyzing firms’
financing choices (e.g. Choe et al., 1993; Gertler and Gilchrist, 1993; Korajczyk and Levy, 2003).

Banjeree et al. (2004) and Lööf (2003) argues that economy-wide factors should have an impact on the speed of adjustment. Also, Hackbarth et al. (2006) theoretical model suggests that the restructuring threshold is lower in an economic boom than in an economic recession because the default threshold selected by shareholders is reduced which leads to decreased bankruptcy costs.

While studying the macro conditions to analyze the capital structure, the two ratios suggested are book value ratio and market value ratio. There is no consensus on whether book- or market-valued leverage ratios should be used in capital structure studies. Some argue that leverage should be computed using the book value of capital because book ratios are independent of factors that are not under the direct control of firms (Fama and French, 2002; Thies and Klock, 1992). Others prefer market leverage ratios. For example, Theylch (2004) provides evidence that market leverage better reflects the agency problems between the creditors and equity holders and can serve as an indispensable input into weighted average cost of capital (WACC) computations.

The study by Korajczyk and Levy (2003) provides new evidence of how macroeconomic conditions affect capital structure choice. The model firms’ target capital structures as a function of macro economic conditions and firm-specific variables. They split their sample based on a measure of financial constraints. Target leverage is counter-cyclical for the relatively unconstrained sample, but pro-cyclical for the relatively constrained sample. Macroeconomic conditions are significant for issue choice for unconstrained firms but less so for constrained firms. Their results support the hypotheses that unconstrained firms time their issue choice to coincide with periods of favourable macroeconomic conditions, while constrained firms do not.
Lastly, Drobetz and Wanzenried (2006) found that trade-off theory is followed by most of the firms surveyed, but the conclusion is based on a very small number of respondent firms.

Using two dynamic partial adjustment capital structure models to estimate the impact of several macroeconomic factors on the speed of capital structure adjustment toward target leverage, Cook and Tang (2009) found evidence that firms adjust their leverage toward target faster in good macroeconomic states relative to bad states. This evidence holds whether or not firms are subject to financial constraints. The results are robust to an alternative method of calculating states and to omitting zero-debt boundary firms and are not driven by firm size, deviation from target, or leverage definitions.

(ii) Corporate Taxation:

Classical capital structure theories (e.g., Modigliani and Miller, 1958, 1963) suggests that corporate tax affects capital structure. Because interest expenses are deducted before tax, debt has a tax advantage over equity, and this tax advantage increases with the corporate tax rate. In a perfect world with no transaction costs, firms would finance with 100 percent debts. When there are bankruptcy costs or other costs, firms have an optimal capital structure that trades off the costs and benefits of debt. Firms with higher tax rates use more debt.

Empirical studies on the relationship between the tax rates and capital structure are voluminous. Earlier studies (e.g., Bradley et al., 1984; Titman and Wessels, 1988) found no evidence to support theoretical predictions that leverage levels and firms’ non-debt tax shields are substituted. Recent studies, such as Scholes et al. (1990) and Graham (1996, 1999) found that marginal tax rates and leverage are simultaneously determined. However, these studies do not answer the question of how an exogenous change in the tax rate affects firms’ leverage decisions.
To examine the effect of an exogenous change in the tax rate on leverage, researchers need to examine a circumstance in which the corporate tax rate has been changed exogenously. Suitable circumstances are rare and are often accompanied by other events that could potentially affect firms’ capital structure. Givoly et al. (1992) examined the 1986 US Tax Reform Act. They found that after the tax reform, firms that had experienced larger drops in the corporate tax rate reduced their use of debt. However, the 1986 Tax Reform Act affected personal tax at the same time, which will also affect capital structure (Graham, 2003).

Although Givoly et al. (1992) use lagged dividend yield as a control variable for the personal tax effect, Rajan and Zingales (1995) indicate that different measurements of personal tax will substantially affect the conclusions.

(iii) Factor Market Structure:

A new literature that links capital structure and factor-product markets has come into focus in the last few years. The factor product market is also simply termed as product approach. This literature relates some elements of the modern financial theory to the stakeholders, market structure and the firms’ strategic behavior leading to (i) stakeholder theory, (ii) market structure theory, and (iii) firms’ strategic behavior theory.

(a) Stakeholder Theory:

This strand of literature highlights the possible connections between the firms’ capital structure and factor-product markets. These studies argue that leverage level might be affected by firms’ non-financial stakeholders, such as customers, workers, suppliers, etc. Thus, they should consider not only shareholders and bondholders as claimants to the firms’ cash flows, but also these non-financial stakeholders.
According to Titman (1984), the level of debt is affected by customers and non-financial stakeholders of firms producing durable or unique goods. The price resistance by customers to these products, the cautious behavior of suppliers to these firms for their delay in payment and potential hires avoiding the job seeking effort in this firm’ have a negative bearing on the debt mobilization level. The risk perception is higher by the shareholders, when there is a possible bankruptcy. Titman documents this phenomenon in case of computer and automobile companies, where debt is less and hotels and restaurants where debt level is high. The studies by Cornell and Shapiro (1987) and Maksimovic and Titman (1991) have also upheld the observation made by Titman.

Bronars and Deere (1991) and Arig (1998) observe that firms use debt to protect shareholders from the threat of unionization. In addition, Sarig found a negative relationship between the union wage and debt.

Sarig (1998) argues that skilled employees of highly leveraged firms can negotiate better contract terms than can employees of identical but less leveraged firms, because highly leveraged firms are more susceptible to employees’ threatening to seek alternative employment than are less leveraged firms.

Banerjee, Dasgupta, and Kim (2004) found that in manufacturing industries supplying specialized products and purchasing a high proportion of their inputs from a few depended suppliers tend to have low leverage.


According to Mene´ndez (2002), debt acts as a disciplinary device for managers and reinforces the shareholders bargaining position against employees. Managers could act to benefit employees, for example, by
increasing employees’ pay off or offering them more stability at work, thus harming the creation of shareholders value.

(b) Market Structure Theory:

The market structure theory asserts that capital structure is determined by the industry characteristics, market reputation of products and management, and the market share. It is also held that the capital structure may influence the market structure.

Myers (1977) posits that the initial level of debt may negatively affect the firms’ survival, because highly indebted firms may be unable to finance large new investments.

Brander and Lewis (1986) and Maksimovic (1988) provide the theoretical framework that links capital structure and market structure. Contrary to the profit maximization objective postulated in industrial organization literature, these theories, like the corporate finance theory, assume that the firms’ objective is to maximize the wealth of shareholders, and show that market structure affects capital structure by influencing the competitive behavior and strategies of firms. Firms in the oligopolistic market will follow the strategy of maximizing their output for improving profitability in favorable economic conditions (Brander and Lewis, 1986). In unfavourable economic conditions, they would take a cut in production and reduce their profitability. Shareholders enjoy increased wealth in good periods, but they tend to ignore decline in profitability in bad times as unfavourable consequences are passed on to lenders because of shareholders limited liability status. Thus, the oligopoly firms, in contrast to firms in the competitive markets, would employ higher levels of debt to produce more when opportunities to earn higher profits arise. The implied prediction of the output maximization hypotheses is that capital structure and market structure have positive relationship in corporate finance, the agency costs theory
supports the use of high debt, and it is consistent with the prediction of the output maximization hypotheses.

Poitevin (1989) argues that shallow-pocket firms are prone to predation by deep pocket competitors. This predation may force highly leveraged firms to lose their market share or even exit the industry.

Harris and Raviv (1990) and Stulz (1990) shows that the initial level of debt may negatively affect survival, because it forces inefficient firms to liquidate, thus leading to a more concentrated market structure.

Opler and Titman (1994) found that more highly leveraged firms in concentrated industries tend to lose market share and experience lower operating profits than do their more conservatively financed competitors during downturns. They know that firms in the top leverage decline in industries that experience output contraction see their sales decline by 26 percent more than do firms in the bottom leverage decline. A similar decline takes place in the market value of equity. These authors also found that highly leveraged firms that engage in RandD suffer the most in economically distressed periods. This finding underlines the fact that firms with specialized products are especially vulnerable to financial distress.

Phillips (1995) states that this debt overhang might force leveraged firms to pass up profitable growth opportunities and, in the most extreme cases, even force them out of the market. In this case, high debt levels lead to a more concentrated market structure.

Chevalier (1995a, b) shows that when firms radically increase their leverage through an leverage buy out (LBO), they become vulnerable and less aggressive, leading to a softer product market competition. Rivals’ profits will increase as they attempt to prey on the LBO firms, and this might encourage local entry and rivals’ expansion. Second, the initial level of debt may
negatively affect survival because it directly affects a firms’ ability to compete.

Kochnar (1996) argues that leverage buy out’s (LBOs) tend to occur in firms that have non-unique assets and low investment opportunities, because the lack of specialized assets in these firms makes the low governance costs of debt the preferred form of financing.

Extending the conclusions Nickell (1996); Nickell, Nicolitsas and Dryden (1997). Warner (1977); Ang, Chua, and McConnell (1982); and Aybar, Casino, and Lopez (2001), Istaitieh and Rodri’guez (2002) found that firms in concentrated industries are more inclined to have high debt level and highly leveraged firms tend to increase industry concentration.

(c) Firms’ Competitive Strategy Theory:

This strand of literature exploits the relationship between the firms’ capital structure and its strategy in the product market. Brander and Lewis (1986) establish that when debt has limited liability, Cournot firms subject to some output market uncertainty will use debt to commit to large market positions in an attempt to gain a strategic advantage. As firms take on more debt, they become motivated to pursue output strategies that raise returns in good states and lower returns in bad states.

Maksimovic (1988) extends the model of Brander and Lewis (1986) by considering multiple periods of interaction. He shows that an increase in debt makes it more difficult for firms to maintain collusive outcomes, because high levels of debt create an incentive for equity holders to deviate from a tacit agreement with rivals.

Showalter (1995) argues that the optimal strategic debt choice of competitors depends on the type of uncertainty that exists in the output market. He found that such competing firms will not use strategic debt. In particular, competitors experiencing uncertain costs found that using debt
causes industry prices and expected firm profit to fall, so these firms do not become leveraged.

Campos (2000), who examines both short- and long-term debt, presents empirical evidence shows that limited liability firms with high short-term debt always act, ceteris paribus, more aggressively in the product markets by increasing their sales. A high proportion of long-term debt seems to reduce this effect. Campos’s study assigns no importance to the source of debt in either case (whether it is bank or commercial debt).

(iv) Ownership Structure:

Ownership structure refers to the pattern of ownership of equity and the basis for its determination is the proportion of equity held by promoters and non-promoters. This proportion is expressed as ownership concentration and it is calculated as the sum of squares of the fractions of equity held by each individual shareholder. Generally, ownership concentration is used in the sense of promoters’ equity holdings. The level of ownership concentration is the result of financial development of an economy. Ownership concentration is lower in developed countries than in developing countries. Johnston (2004) founds those only two shareholders typical holding more than 50 percent of a firms’ equity in the companies of Latin American economies.

The study presented by Berle and Means (1932) initially developed the agency theory and they argued that there is an increase in the gap between the ownership and control of large organizations arising from a decrease in equity ownership. This particular situation provides a platform for managers to pursue their own interest instead of maximizing returns to the shareholders.

The early studies by Jensen and Meckling (1976); Leland and Pyle (1977); and Diamond (1984) predicts that shareholders of firm with more concentrated ownership prefer less debt if debt brings more monitoring or loss of control. In other words, these studies predict that there is a positive
relationship between the leverage and ownership concentration devoid of loss of control.

Another strand of research in ownership structure is the pattern of capital structure in conglomerates. High concentration of ownership in conglomerates of low financial development economies, especially in Latin America, prefer debt through internal capital as evidenced in the studies of Silva, Majluf and Paredes: 2006; Chong and Lopez-de-Silanes: 2007; and Young and Tsai: 2008.

The study made by Coase and Hart reviews and proposes, if complete contracts could be written and enforced, ownership structure should not be a matter of concern (Coase (1960), Hart (1983)). In general, public sector firms are argued to be less efficient than private sector firms (in relatively competitive markets) due to low powered managerial incentives and interest alignment. There could be “political” reasons, as government pursues multiple objectives, some of which, unlike profit maximization, are hard to be contracted upon. Share holding pattern in such cases can make a difference in terms of firms’ performance.

One the other hand, Demsetz and Lehn (1985) investigated the impact concentrated ownership on 511 large US firms during the period 1976-80. This study employed return on equity (ROE) and standard error of market return as performance measures. They also classified concentrated ownership based on percentage of shares held by the top 20 shareholders. Herfindahl measures the ownership concentration, percentage of shares controlled by top five families and individuals, and finally percentage of shares controlled by institutional investors. The findings indicated that: (a) there is no significant relationship between the performance by accounting return and ownership by 5 to 20 largest shareholders or the Herfindahl index; and (b) there is a significant positive relationship between the ownership by families and individuals or institutional investors (ownership by 5 or 20 largest
shareholders) and standard error of market return. Also, Holderness and Sheehan (1988) studied 101 firms with concentrated owners and 101 firms with diffused owners. They found no significant difference in performance (Tobin’s Q and ROE) between the majorities held and dispersed ownership. Murali and Theylch (1989) studied the performance of 43 closely-held and 83 widely held US firms during the period 1977-81. The findings support this notion that concentrated ownership or dispersed ownership does not affect the performance of firms.

Shleifer and Vishny’s (1986) active monitoring hypotheses, however, has been challenged by Pound (1988) who argues that large shareholders may be passive voters who collude with corporate insiders against the best interests of dispersed shareholders.

Friend and Lang (1988) test the effect of non-managerial block holders on leverage and found that the presence of such shareholders increases the debt level. However, in their analysis, the level of managerial share ownership does not play a role. Their analysis makes no direct predictions as to whether the relationship between the external block ownership and the debt ratio varies with the level of managerial share ownership.

Morck et al (1988) argues that when managers hold a large proportion of the firms’ shares, they generally have enough voting power, or influence, to guarantee their current employment and remuneration with the firm.

As for the relationship between the institutional investors and corporate performance, Brickley et al. (1988) provided some evidence that institutional ownership has a positive relation with corporate performance. This is because shareholders have a significant degree of control over management and they can play their role effectively and can thwart management’s harmful decisions. As a result of ownership control over managers, the relationship between the institutional ownership and corporate performance can be positive.
Pound (1988) found a negative relationship between the institutional ownership and corporate performance. This was attributed to the probability that management will prevail in a proxy contest is increasing with the fraction of shares held by institutional investors.

McConnell and Servaes (1990) indicated that there is a significant relation between the profitability and ownership by managers and directors. In addition, they showed that performance increases significantly with institutional ownership, but no measure of block holder ownership seems to have any effect.

Smith (1990) who carried a study on 58 management buyouts of public companies during the period of 1977 to 1986. His findings revealed that there exists a positive relationship between the management ownership and the performance of the firm. Their study also provide empirical evidence that increase in operating profits result from the decrease in operating costs and the proper management of working capital of the firms. This is in line with Lichtenberg and Siegel (1990).

Shome and Singh (1995) report significant positive abnormal returns associated with announcements of block acquisitions by external shareholders. Moreover, they show that the abnormal returns are positively associated with a reduction in agency costs (through proxy variables).

Rajan and Zingales (1995) contend that the effect of ownership concentration on capital structure is far from obvious. The study by Lefort and Urzua (2008) found that the presence of large shareholders on the board of directors reduces the extent of agency costs between the managers and shareholders and facilitates equity issuances.

Agrawal and Knoebar (1996) investigated 383 large US firms to evaluate the relation between the firm performances and block holders and insider ownership by directors and officers. The results indicated that the
measure of firm performance (Tobin’s) has a significant negative relation with board outsiders, leverage and corporate control activity and it increased significantly with insider ownership. Moreover, they found that institutional investors increased significantly by corporate control activity. Institutional ownership decreased significantly with block holder ownership and vice versa.

Peck (1996) pointed to positive relationship between the new block holders and firm performance but the old institutional block holders have no impact on the performance of a firm.

Bethel et al (1998) found that long term operating performance of firms improves subsequent to the acquisition of a block by activist shareholders.

Himmelberg, Hubbard, and Palia (1999) have argued that regression of firm performance on ownership variables is potentially miss-specified because of the presence of the firm heterogeneity. Specifically, if some of the unobserved determinants of firm performance are also determinants of ownership, then ownership might spuriously appear to be a determinant of firm performance.

Chen (2001) tested the relationship between the ownership structure and firms’ value in the case of China. He found that there existed a strong positive relationship between the concentrated ownership and corporate value. In addition, he reported a positive relationship between the corporate values and domestic institutional shareholders.

Zhou (2001) has argued that the firm-fixed, effects are not necessary in terms of ownership, as the ownership structure in general does not vary over time for a specific firm. Similar arguments may be valid while analyzing the impact of corporate governance (ownership structure) on firms’ capital
structure. However, in Indian case, the argument made by Zhou (2001) against the use of firm-level panel data analysis is not valid.

The study made by Elliot (2002) suggests that, in theory, shareholders of a company are the owners and the duty of top management should be solely to ensure that shareholders interests’ are met. In other words, the duty of top managers is to manage the company in such a way that returns to shareholders are maximized thereby increasing the profit figures and cash flows.

The study of Dolmat-Connel (2002) showed that the profitability of firms increase considerably when managers are given shares of the company. This is because the managers will work in the interest of the shareholders since the managers themselves own shares of the firm. Therefore, linking the ownership structure to management can solve the principal agent problem.

Dimitris Margaritis, Maria Psillaki (2005) the paper investigates the relationship between the capital structure, ownership structure and firm performance using a sample of French manufacturing firms. They employ non-parametric data envelopment analysis methods to empirically construct the industry’s ‘best practice’ frontier and measure firm efficiency as the distance from that frontier. Using these performance measures they examined more efficient firms choose more or less debt in their capital structure.

According to Jacelly Céspedes, Maximiliano González, Carlos A. Molina (2005), The study evaluates the capital-structure determinants of Latin American firms using a comprehensive sample covering seven countries. Firms in the region have debt levels similar to those of U.S. firms, which is puzzling, given that Latin American firms experience relatively lower tax benefits and higher bankruptcy costs. Their study argues that ownership-concentrated firms avoid issuing equity because they do not want to share control rights. Latin American firms have high ownership concentration, which creates an ideal setting to study how ownership concentration explains
firms' capital structure. Consistent with the control argument, their study found a positive relation between the leverage and ownership concentration, when losing control becomes an issue. Also, their study shows a positive relationship between the leverage and growth. In addition, the study reports that other determinants that do not proxy for control rights are consistent with previous findings. Firms that are larger, have more tangible assets, and are less profitable are also more leveraged.

According to Bahram Barzegar and K Nagendra Babu (2008) the study investigates the relationship between the ownership structure and corporate performance of Iranian companies. Specifically, it deals with the relationship between the institutional ownership and corporate performance. The findings of the study suggest that first; there is a significant difference between the performance of institutional share ownership and non-institutional share ownership. Results also reveal that if return on asset (ROA) is used as dependent variable, the performances of firms controlled by institutional share ownership are significantly better than those of other firms. In addition, although results indicate that the performance of institutional share ownership is better than others, there is no significant difference between the return on equity (ROE), Tobin’s Q ratio and ownership structure. However, the results establish that institutional ownership has more positive effect on firms’ performance than other type of ownership. Second, the study presents evidence on positive and significant relationship between the performance (ROA) and the institutional share ownership. These findings are in consistent with our expectation and some previous studies (Brickley et al., 1988; and McConnell and Servaes, 1990). Third, their findings indicate that there is a significant negative relationship between the performance and company size. This suggests that managers of large firms are not able to control firms’ operational activities. Fourth, the results show that companies with higher debt to asset ratio have lower returns. In spite of this, there is a significant negative relationship between the performance (ROA) and debt to asset ratio (DAR),
findings show that relationship between the performance (ROE and Tobin’s Q ratios) and DAR is significantly positive. Fifth, evidences prove that about 50 percent of the active firms on the Tehran Stock Exchange are controlled by financial companies and approximately 62 percent of the outstanding shares of firms listed on TSE are controlled by the top three shareholders. Moreover, the performance of the firms with diffused ownership structure is better than concentrated ownership, and finally, the overall results provide evidences on the positive relationship between the institutional ownership and firms’ performance.

The study by Lefort and Urzua (2008) found that the presence of large shareholders on the board of directors reduces the extent of agency costs between the managers and shareholders and facilitates equity issuances.

Lastly, while studying the capital structure in Latin American countries, Cespedes, Gonalez and Molina (2009) found a positive relationship between the leverage and ownership concentration. However, they observe that this result is due to low levels of investor protection and financial development in those countries.

(v) Firm Performance:

Firm performance may also affect the choice of capital structure. Berger and Bonaccorsi di Patti (2006) stipulate that more efficient firms are more likely to earn a higher return for a given capital structure, and that higher returns can act as a buffer against portfolio risk so that more efficient firms are in a better position to substitute equity for debt in their capital structure. Hence under the efficiency-risk hypotheses, more efficient firms choose higher leverage ratios because higher efficiency is expected to lower the costs of bankruptcy and financial distress. In essence, the efficiency-risk hypotheses is a spin-off of the trade-off theory of capital structure whereby differences in efficiency, all else equal, enable firms to fine tune their optimal capital structure. It is also possible that firms which expect to sustain high
efficiency rates into the future will choose lower debt to equity ratios in an attempt to guard the economic rents or franchise value generated by these efficiencies from the threat of liquidation (Demsetz, 1973; Berger and Bonaccorsi di Patti, 2006). Thus in addition to equity for debt substitution effect, the relationship between the efficiency and capital structure may also be characterized by the presence of an income effect. Under the franchise-value hypotheses more efficient firms tend to hold extra equity capital and therefore, all else equal, choose lower leverage ratios to protect their future income or franchise value. Thus the efficiency-risk hypotheses and the franchise-value hypotheses yield opposite predictions regarding the likely effects of firm efficiency on the choice of capital structure. Although they cannot identify the separate substitution and income effects our empirical analysis is able to determine which effect dominates the other across the spectrum of different capital structure choices.

The empirical implications of the trade-off theory, the market timing theory, and Theylch's (2003) theory of capital structure are examined using aggregate US data for 1952 to 2000 by Frank and Goyal (2004). There is a long-run leverage ratio to which the system reverts. Deviations from that ratio help to predict debt adjustments, but not equity adjustments. A high market-to-book ratio is associated with subsequent debt reduction, but there is no effect in the equity market.

The study by Tian and Zeitun (2007) investigates the effect which capital structure has had on corporate performance using a panel data sample representing of 167 Jordanian companies during 1989-2003. The results show that a firms’ capital structure had a significantly negative impact on the firms’ performance measures, in both the accounting and market's measures. They also found that the short-term debt to total assets (STDTA) level has a significantly positive effect on the market performance measure, which is popularly measured through Tobin's Q developed by James Tobin (1941).
Using quantile regression analysis Margaritis and Psilliski (2009) shows that the effect of efficiency on leverage is positive in the low to high ranges of the leverage distribution supporting the efficiency-risk hypotheses.

(vi) Behavioral Corporate Finance:

Fully rational behavior means that all agents in the market have rational expectations and are expected utility maximizers. In behavioral corporate finance, the assumption of fully rational investors and managers is abandoned. Beliefs and preferences may be non-standard and thus allow for irrational behavior, and theories taking this into account might lead to new determinants that help improving our understanding of capital structure determinants. In the behavioral corporate finance literature, two salient approaches have emerged (Neus and Walter: 2008). In the irrational investors approach, rational managers are facing irrational investors. The associated literature basically deals with inefficient markets and rational managers exploiting mispricing, such as the market timing story of Baker and Wurgler (2002). In the irrational managers’ approach, it is assumed that not fully rational managers are operating in efficient markets, i.e. facing rational investors. Most of the literature in the irrational managers’ approach focuses on deviations from rational expectations. There is some evidence from social psychology that individuals and especially managers have biased beliefs. Some possible distortions in managerial beliefs emphasized in the behavioral corporate finance literature are optimism and overconfidence (Barberis and Thaler: 2003). Optimism is basically the overestimation of the expected value of some quantity. For instance, the manager estimates too large a return on a certain project. This relates to the notion of assessing oneself as being better than average. On the other hand, overconfidence is the underestimation of the variance of some quantity (i.e. underestimation of risk). This leads to confidence interval estimates that are too narrow, where e.g. the manager then estimates too small a range of returns on a certain project.
Ben-David et al. (2007) analyzes whether Chief Financial Officers (CFOs) are overconfident and whether this has an impact on corporate policies, including capital structure issues. They use a survey of standard and Poor (S and P) 500 return forecasts of CFOs between the 2001 and 2007. The financing-related hypotheses state that overconfident managers perceive their firms’ equity to be undervalued by the market, that leverage increases with managerial overconfidence, and that overconfident managers repurchase shares more often. They found that CFOs are overconfident, i.e. they underestimate the variance of market returns, because realized market returns are within the estimated 80 confidence intervals only 38 percent of the time.

Malmendier et al. (2007) tests capital structure-related hypotheses using two alternative measures of managerial irrationality. The first hypotheses by Malmendier is that overconfident managers prefer debt to equity conditional upon using external financing, because managers perceive the price of newly issued equity as too low in their model. Their second hypotheses is that managers prefer internal to external financing unconditionally, which might result in using debt too conservatively, thus exploiting the tax benefits not optimally. Testing the first hypotheses, the evidence implies that overconfident CEOs are less likely to issue equity in comparison to their peers, which supports pecking order financing due to overconfidence. They also found support for their second hypotheses that overconfident CEOs rely more heavily on internal financing. Furthermore, they found that the longer a firm is managed by overconfident managers, the higher is the firms’ leverage in the long term.

(vii) Equity Market Timing:

A related strand of literature focusing on external financing decisions claims that managers attempt to time equity markets by issuing shares at high market prices and repurchasing shares at low market prices.
Motivated by the collective evidence on equity market timing, Baker and Wurgler (2002) provide an alternative hypotheses explaining observed capital structure. According to the authors, ‘‘capital structure is the cumulative outcome of past attempts to time the equity markets’’

The market timing hypotheses has generated significant controversy because it is at odds with extant theories of capital structure. Several recent studies question the persistent impact of market timing attempts as well as the interpretation of historical market-to-book ratio. Leary and Roberts (2005) show that a typical US firm rebalances its capital structure in three to five years following the equity issuance. Similarly, Flannery and Rangan (2006), Kayhan and Titman (2007), Alti (2006) and Hovakimian (2006) suggest that the impact of equity market timing on leverage is short lived. To the contrary, Huang and Ritter (2006) conclude that past security issues have a long-lasting effect on capital structure. The market-to-book ratio of equity plays a dual role in empirical studies. It is used as a measure of market mis-valuation (over or under-pricing) and is utilized as a proxy for future growth opportunities in the trade-off framework.

The simulations of Hennessy and Whited (2005) suggests that in a dynamic trade-off model with no adjustment costs, historical market-to-book ratio has an inverse relation with leverage. Similarly, Liu (2005) and Hovakimian (2006) argue that a negative coefficient for historical market-to-book ratio is more consistent with models of trade-off with adjustment costs than with the equity market timing hypotheses. However, Chen and Zhao (2004) argue that past market-to-book ratios can explain leverage through persistent financing policies, which is more consistent with market timing hypotheses.

Loughran et al. (1994), Henderson et al. (2005) and Brounen et al. (2004) provides evidence of equity market timing by managers in countries other than US. Even Rajan and Zingales (1995) hint at the possibility of
managerial market timing behavior in G-7 countries. Yet only three papers have investigated the equity market timing hypotheses in non-US markets and their results are mixed. Hogfeldt and Oberonko (2004) and Bie and Haan (2004) found inverse relation between the external finance the weighted average market-to-book ratio (EFWAMB) and leverage in Stheyden and Netherlands, respectively. Mendes et al. (2005) investigate the issue in Brazil and found no relation between the EFWAMB and leverage.

Alti (2006) examines the capital structure implications of market timing. He isolates timing attempts in a single major financing event, the initial public offering, by identifying market timers as firms that go public in hot issue markets. He found that hot-market IPO firms issue substantially more equity, and lower their leverage ratios by more, than cold-market firms do. However, immediately after going public, hot-market firms increase their leverage ratios by issuing more debt and less equity relative to cold-market firms. At the end of the second year following the IPO, the impact of market timing on leverage completely vanishes.

Mahajan and Tartaroglu (2008) investigate that, the equity market timing hypotheses of capital structure in major industrialized (G-7) countries. As claimed by its proponents, they found that leverage of firms is negatively related to the historical market-to-book ratio in all G-7 countries. However, this negative relationship cannot be attributed to equity market timing. They found no association between the equity issues and market-to-book ratios at the time of equity financing decisions by Japanese firms.

(viii) Institutional Characteristics:

the effect of institutional differences in capital structure determination of the
G-7 countries, they however mention that the differences that they found in
capital structure determination among countries may exist partly due to
differences in the tax code, bankruptcy laws, the state of development of bond
markets and patterns of ownership, suggesting that future research should
focus on analyzing the relation between the institutional characteristics and
capital structure determination.

LaPorta et al. (1998) examines laws governing investor protection, the
quality of enforcement of these laws and ownership concentration and
conclude, among others, that external finance availability is influenced by
these factors. Demirguc-Kunt and Maksimovic (2002) start their analysis by
recognizing that the relative development of banks versus markets varies
considerably across countries and they found that this difference affects firms'
ability to obtain external financing for growth. They found that there is no
evidence that the development of a market-based or bank-based financial
system *per se* affects access to financing. Beck et al. (2004) examine the
relation between the development of a country's financial and legal
institutions and size and they found that firms are larger in countries with
more developed, concentrated banking sectors and efficient legal systems.

Booth (2001) uses a new data set to assess whether capital structure
theory is portable across countries with different institutional structures. They
analyze capital structure choices of firms in 10 developing countries, and
provide evidence that these decisions are affected by the same variables as in
developed countries. However, there are persistent differences across
countries, indicating that specific country factors are at work. The findings
suggest that although some of the insights from modern finance theory are
portable across countries, much remains to be done to understand the impact
of different institutional features on capital structure choices.
From the viewpoint of emerging economies, the results by Fernandez (2008) give more support to the trade-off theory than to the pecking-order hypotheses. In particular, in recent years equity issues have followed firms’ financing deficits more closely than net debt issues have. He conjectures that tax and monetary policies might have driven this result.

The study conducted by Vasiliou and Daskalakis (2009) investigates whether differences in institutional characteristics result in different capital structure determination among countries. Greek firms seem to follow an own-business policy and seem to care more about the disadvantages of debt than try to exploit its advantages. Financial distress considerations, market timing and competitiveness are important factors, whereas agency costs of equity, pecking order and the signaling theory do not seem to apply. Conclusions are relatively similar with those of other countries, though specific differences that can be attributed to the different institutional settings do exist. In general however, they conclude that differences in institutional characteristics do not seem to affect the way of thinking of financial managers when they decide on capital structure issues. The study by Vasiliou and Daskalakis (2009) found that different forms of capital play different roles in the financing of the company.

(ix) Multinational Corporations (MNCs):

Foreign operations of multinational companies (MNCs) suffer from the limitations of being foreign so they must have some unique advantage compared to local competitors. Generally, this advantage is seen to arise from sources such as specialized technology and management knowhow, important brand or other intangible asset, or another competency, resource, or advantage (Buckley, 1998; Buckley and Casson, 1976; Hennart, 1982). Another stream of literature has noted that multinational networks can themselves be sources of social capital and strategic advantage (Gulati et al., 1989; Holm et al., 1996) and multinational networks can provide operating flexibility and be
sources of valuable real options (Buckley and Tse, 1996; Kogut and Kulatalika, 1994). Many others have contended that much of this strategic option value arises from the financing advantages of MNCs, i.e., the MNCs enjoy advantageous financing access and a lower cost of capital with their ability to tap multiple national capital markets (Eiteman et al., 2001; Eun and Resnick, 2001).

Prior empirical literature has also documented the relationship between the firm multi-nationality and capital structure. Fatemi (1988), Lee and Kwok (1988), Burgman (1996), Chen et al. (1997), Kwok and Reeb (2000), and Doukas and Pantzalis (2003) all systematically report that the debt levels decline with the degree of firms’ multinationality.

The literature posits that subsidiaries in high tax rate and low cost of borrowing countries should take advantage of those favorable conditions and borrow more heavily than implied by the parent’s or local norms (Graham (2003), Newberry and Dhaliwal (2001), Chowdhry and Coval (1998), Chowdhry and Nanda (1994))

However, Desai (2000) and Desai et al (2004) note that multinationals may not be able to take full advantage of their financial flexibility when their actions are limited by host country institutions or regulations, specifically, investor rights and legal institutions.

The capital structure choice for foreign affiliates of a multinational company is further complicated by the host country political risk (Stonehill and Stitzel, 1969; and Eiteman et al., 2001) They discuss how foreign affiliates can and do tend to borrow heavily in local markets to reduce asset exposure to political risk. However, Eiteman et al. (2001) note the multinational affiliates’ advantages of conforming to local financial structure norms with these advantages being partially mitigated by any associated costs of such nonconformity.
Another issue concerning the capital structure of subsidiaries is the role of exchange rate risk and host country market factors. Multinational firms may find it optimal to alter the amounts and the currency and maturity composition of debt held by affiliates’ to protect against losses due to exchange rate changes. Making the subsidiary capital structure choice even more complex, such as inflation and interest rates are also important in affecting affiliates’ capital structure (Stonehill and Stitzel, 1969; Robbins and Stobaugh, 1972).

Other studies expand on various aspects of how these numerous factors may interact to influence a foreign affiliate’s capital structure. Stanley (1981) reviews capital structure models for the multinational firm and posits that the complexity of capital structure decision for the multinational firm is due to exchange risks, tax differentials and multiple market environments. Considering tax impacts, exchange risks, and local capital structure norms,

Kornbluth and Vinso (1982) developed an approach to optimizing a foreign affiliate’s capital structure by minimizing the overall financing costs on a consolidated basis. Lessard and Shapiro (1988) discuss the financing choices of multinational affiliates given the importance of taxes, exchange risks, political risks and local financial market conditions and conclude that parent and affiliate capital structures should be allotted to differ if the firm is to exploit the opportunities available as a multinational.


Eckert and Engelhard (1999) assess the applicability of capital structure theories to multinational corporations and consider the role of
different stakeholders, agency costs, cultural diversity, and exchange risks. They highlight that the capital structure theory for foreign subsidiaries can be understood only after considering the host country’s cultural contexts and regulatory environments.

Eun and Resnick (2001) summarizes the many important issues in determining the financial structure of foreign subsidiaries of multinational firms and suggest that affiliate’s capital structure should vary to capitalize on opportunities to lower taxes, reduce financing costs and risks, and take advantage of various market imperfection.

The empirical study by Aggarwal and Kyawb (2008) documents multinational company’s’ strategic advantages arising from its internal financial network. Using data from US multinational company affiliates in 62 countries, they show that MNC affiliates in countries with low credit availability, poor creditor protections, high political risks, and high inflation are found to bear high interest costs and multinational affiliate debt ratios are high in high tax countries.

(x) **Internationalization of Business:**

Despite phenomenal growth in the theory of capital structure there is no unique theoretically predicted relationship between the various firm specific business, financial, and lifecycle stage characteristics on one hand and composition and degree of financial leverage and consequent cost of capital on the other. This is particularly so in the case of issues related to multinational corporations’ (hereafter MNCs) financial structure choices and the cost of capital implications of those choices. Earlier studies provide a substantial body of empirical evidence (Burgman, 1996; Chen et al., 1997) suggesting that MNCs tend to carry less debt in their capital structure than domestic firms. However, more recent evidence by Mansi and Reeb (2002) suggests that not only MNCs carry more debt than domestic corporations (hereafter DCs), their cost of debt financing is also lower than that of DCs
(Reeb et al., 2001). At present, the debate focuses on resolving the obvious question: why, despite a lower cost of debt financing, MNCs carry less debt?

Levy and Sarnat (1970) and Lessard (1973) highlight the risk reduction benefits of multinational diversification. Similarly, Agmon and Lessard (1977) indicate that MNCs have greater stability against volatile markets. The reduced variability of earnings is perceived as financial strength by investors in the firm and thus results in reduced cost of capital. Fatemi (1984), among others, reports that internationally diversified firms have lower systematic risk that would get translated into lower cost of equity capital relative to DCs.

Following Lewellen’s (1971) arguments that product diversification provides a coinsurance thereby enhancing corporate debt capacity, Heston and Routheynhorst (1994) provide evidence that diversification across political boundaries reduces risk more than diversifying across industries within one country. In the same vein, Agmon and Lessard (1977) and Fatemi (1984) posit that international diversification reduces the expected cost of bankruptcy and allows for increased debt capacity. Chkir and Cosset (2001) suggest that leverage increases with both international and product diversification. However, more recently, Singh et al. (2003) provide evidence that while product diversified firms have higher degree of leverage relative to product focused firm, MNCs support a lower level of debt financing relative to Depository Certificate (DCs).

Given the imperfections in the international capital markets, firms undertaking international operations will have to incur additional costs to overcome these barriers. However, it is argued (Kindelberger, 1969; Caves, 1971) that MNCs, by virtue of their ability to internalize the capital market transactions, are able to overcome capital flow barriers consequent to market imperfection. The resulting internal capital markets, by providing an opportunity for MNCs to avoid costly external market transactions, help reduce their cost of capital.
Kim and Lyn (1986) suggests that MNCs often outperform local companies in host countries and have more growth opportunities hence MNCs will have lower leverage as the agency costs associated with the debt holder–stockholder conflict is likely to be a positive function of a firms’ growth opportunities.

Ethier and Horn (1990) and Ethier (1996) found that high growth MNCs carry more intangible assets having no collateral security for debt holders and this discourages MNCs from utilizing higher debt financing.

Rajan and Zingales (1995) investigates the determinants of capital structure choice by analyzing the financing decisions of public firms in the major industrialized countries. At an aggregate level, firm leverage is fairly similar across the G-7 countries. The authors found that factors identified by previous studies as correlated in the cross-section with firm leverage in the United States are similarly correlated in other countries as well. However, a deeper examination of the U.S. and foreign evidence suggests that the theoretical underpinnings of the observed correlations are still largely unresolved.

While there has been extensive work on the issue of relating cost of equity to international diversification, only very recently (Mansi and Reeb, 2002; Reeb et al., 2001; Singh and Nejadmalayeri, 2004) have researchers focused on the relationship between the cost of debt capital and international diversification. There has been no work analyzing the overall cost of capital and international diversification link.

Burgman (1996) and Fatemi (1988) found that MNCs have lower debt ratios. Lee and Kwok (1988) report that after controlling for size and industry related factors, MNCs have higher agency costs than DCs and that may explain why MNCs are less leveraged than DCs. In terms of agency costs of debt, Chen et al. (1997) argue that MNCs have higher bankruptcy costs and agency costs of debt. Doukas and Pantzalis (2003) provide evidence that
suggests that MNCs face higher agency costs of debt than DCs, hence leading MNCs to seek less long-term debt financing than DCs.

Burgman (1996) argues that due to institutional, legal, and socio-cultural differences across nations, MNCs may face higher degree of information asymmetries. This line of reasoning is in tandem with the earlier observations by Lee and Kwok (1988) by Myers’ (1977) framework.

It is argued that MNCs operate as they do in foreign economies, may be perceived more negatively by investors in terms of financial, business, and socio-political risks involved in a foreign economy (Aliber, 1984). Reeb et al. (1998) and He and Ng (1998) suggest that in addition to facing unique political risk exposure, MNCs face a higher risk of foreign exchange exposure that leads to increased variability in their domestic currency denominated earnings. These risks, unique to MNCs, may result in higher probability of them experiencing financial distress thereby raising their overall cost of capital.

If MNCs face higher exchange rate and political risks compared to DCs, they should expect MNCs to carry more debt to hedge against those risks by borrowing in the local (host) country debt market. Burgman (1996), found a positive relationship between the political and exchange rate risk and leverage, argues in terms of companies using leverage to hedge away these risks. More recently, Kedia and Mozumdar (2002) report strong evidence that firms issue foreign currency debt to hedge their exposure in the underlying currency.

In addition, given that international diversification may result in changes in the levels of volatility (Bodnar and Wong, 2000) and associated reduction in the value of equity call option, cost of equity is expected to go up and that of debt go down. The net effect of these two tendencies on the total cost of capital will depend on the degree of international diversification and level of debt financing.
Reeb et al. (2001) suggests that greater international activity may lead to lower risks due to diversification benefits for debt holders, while simultaneously increasing the riskiness of equity capital due to risks exchange rate fluctuations specific to international operations.

The study by Singh and Nejadmalayeri (2004) examines the relationship between the international diversification, financial structure, and their individual and interactive implications for the combined debt and equity cost of capital for a sample of French corporation. They found that the degree of international diversification positively associates with higher total and long-term debt ratios.

(xii) Nature of Industry:

The literature on how the nature of industry influences the capital structure is very much limited. The most basic stylized facts concerning industry characteristics and capital structure are that firms within an industry are more similar than those in different industries and that industry tend to retain their relative leverage ratio rankings over time (Botheyn, et al. (1982), Bradley et al. (1984)).

The study by Scott (1972) indicates that different industries develop different financial structures due to the levels of business risk for each industry.

Leverage ratios of specific industries have been documented by Botheyn, et al. (1982), Bradley, et al. (1984), Long and Malitz (1985), and Kester (1986). Their results are in broad agreement and show that drugs, instruments, electronics, and food have consistently low leverage while paper, textile mill products, steel, airlines, and cement have consistently high leverage. Moreover, regulated industries (telephone, electric and gas utilities and airlines) are among the most highly levered firms according to the study by Bradley, et al. (1984).
Specifically, Botheyn et al. (1982) test the empirical evidence of cross-industry differences in financial leverage. They perform both the cross-sectional studies among different industries and the inter-temporal studies within each industry. Their study indicates consistent significant differences in the level of financial leverage among industries. They found that the ranking of industry leverage remains consistent over the time period studied and that the leverage level adopted by an individual firm within each industry tends to revert back to the industry average over the same time period.

Titman (1984) suggests that the firms that produce manufacturing equipment require specialized servicing and spare parts and have high cost of liquidation. As a result, these firms are less likely to be financed with debt.

The study by Fischer and Henkel and Zechner (1989) develops a model of dynamic capital structure choice in the presence of recapitalization costs. The theory provides the optimal dynamic recapitalization policy as a function of firm-specific characteristics. The authors found that even small recapitalization costs lead to wide swings in a firm's debt ratio over time. Rather than static leverage measures, they use the observed debt ratio range of a firm as an empirical measure of capital structure relevance. The results of empirical tests relating firms' debt ratio range to firm-specific features strongly support the theoretical model of relevant capital structure choice in a dynamic setting.

Miao (2005) provides a competitive equilibrium model of capital structure and industry dynamics. In the model, firms make financing, investment, entry, and exit decisions subject to idiosyncratic technology shocks. The capital structure choice reflects the tradeoff between the tax benefits of debt and the associated bankruptcy and agency costs. The interaction between the financing and production decisions influences the stationary distribution of firms and their survival probabilities. The analysis demonstrates that the equilibrium output price has an important feedback
effect. This effect has a number of testable implications. For example, high growth industries have relatively lower leverage and turnover rates.

The study by Cole et al (2007) focus on capital structure of privately held small firms. He found 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, they 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 found 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.

(xii)Technical Change:

The efficiency of a financial system to reallocate resources to the economy’s most productive industries, firms and projects is often considered to be an important driving force to technological change, innovation, industrial dynamics and growth (Schumpeter, 1911)

Rajan and Zingales (2001) argues that investment in intangible assets such as R and D is easier to finance on the stock market, since collateral is essential to obtain external financing by issuing debt to the banking sector. Carlin and Mayer (1999) give support for these hypotheses when studying 27 industries in 20 OECD countries over the period 1970–1995. They found a positive correlation between equity financing, R and D intensity, growth, and probably the very important factors of accounting standard (Carlin and Mayer (1999), Beck (2001).

Analyzing 724 Small Scale Enterprises (SMEs) from all major sectors of the Finnish economy, Hyytinen and Toivanen (2002) found that capital
market imperfections hold back innovation and growth for small and middle-sized firms. This finding is in line with the results reported for other countries (Brown (1997), Bond et al. (1999), and Bougeras et al. (2001).

In their cross-country study, King and Levine (1993) found that the financial sector size is positively correlated with macroeconomic growth. However, La Porta et al. (1997) show that UK and US have the largest financial markets, 40–250 above the mean value, while Switzerland together with several other continental European countries is fluctuating around the mean value.

Loof (2004) explores the importance of capital structure by comparing existing archetypes of financial systems through a new methodological application. Differences in firms’ cost of capital show that capital structure is relevant in R and D and other investment decisions. The conclusions are that (1) there are large and also unexpected cross-country differences in determinants to optimal capital structure; (2) observed leverage is often different from target in both equity (or stock market based) and debt (or bank based)-dominated systems; and (3) faster speed towards the target is observed in the equity-based system indicating a higher flexibility.

(xiii) Investment Effect:

Another strand of research is related to how leverage influences the future investments. If Maksimovic (1988) posits that leverage increase future investment, the findings by Phillips (1992, 1995) show that industry output may decrease, instead of increase, with an increase in debt. If a firm increases its debt, doing so is a commitment not to invest in the future, because the percentage of cash flow to be paid out each period is increased, which results in less cash flow available to invest.

The studies by Chevalier (1995a, b); Chevalier and Scharfstein (1995, 1996); Glazer (1994); Lambrecht (2001); and Phillips (1995) found that the
firms’ competitive strategy would be affected by competitive strategy and hence firms follow a softer competitive strategy.

Kovenock and Phillips (1997) present several significant empirical findings that relate capital structure to plant closure and investment decisions. They found that recapitalization and investment are negatively associated in highly concentrated industries, and that there is a significant positive association between the rival firms’ investment and a recapitalizing firms’ increase in leverage. That is, following their recapitalization, firms in highly concentrated industries are more likely to close plants and less likely to invest. When the market share of leveraged firms is higher, rival firms are less likely to close plants and more likely to invest. Chevalier (1995a) and Chevalier and Scharfstein (1995, 1996) present similar results.

On the whole, the investment effect of leverage is perceived to have less aggressive or more aggressive behavior by a firm.

However, the studies by Brander and Lewis (1986); Maksimovic (1988); and Showalter (1995, 1999) predicts that under certain conditions, leverage will cause firms to behave more aggressively (i.e., by increasing output, or by cutting prices or by increasing investment which make competition tougher.

Kovenock and Phillips (1997) examines whether capital structure decisions interact with product market characteristics to influence plant closing and investment decisions. The empirical evidence in this paper shows that a firm’ capital structure, plant level efficiency, and industry capacity utilization are significant determinants of plant (dis)investment decisions. They found that the effects of high leverage on investment and plant closing are significant when the industry is highly concentrated. Following their recapitalizations, firms in industries with high concentration are more likely to close plants and less likely to invest. In addition, they found that rival firms
are less likely to close plants and more likely to invest when the market share of leveraged firms is higher.

Clayton (1999) found that the firms’ shareholders will have an incentive to be more aggressive in the product market and to increase their own output, which causes a reduction in the rivals’ output. The increment in the firms’ output, which raises the marginal benefit of low marginal cost firm, leads the firm to have motives to increase.

According to Istaitieh and Rodriguez (2003), high leverage level induces firms to pursue a less aggressive strategic behavior (i.e., by raising prices), which leads to a softer product market competition. The other direction effect appears as firms take into account the softness of competition in product markets at the time of determining their leverage level, and choose to hold a high level of debt.

Chang et al (2009) found that with the capital structure measured simultaneously by the ratios of long-term debt, short-term debt, and convertible debt to the market value of equity. They show that growth is the most important determinant of capital structure choice, followed by profitability, collateral value, volatility, non-debt tax shields, and uniqueness. Moreover, they found that long-term debt is the most important proxy of capital structure, followed by the short-term debt, and then convertible debt.

(xiv) Firms’ Histories:

According to Kayhan and Titman (2007:1), “history does in fact have a major influence on observed debt ratios, and that these effects at least partially persist for at least ten years. However, the long-term effects of a firms’ history on its capital structure have been exaggerated in some of the recent literature. Their evidence indicates that a portion of these history effects are subsequently reversed, and that debt ratios tend to move towards target ratios based on traditional tradeoff variables.”
The empirical studies related to firms’ history as a proxy focus on past profitability, financial deficits, and leverage deficit.

(1) Past profitability: Titman and Wessels (1988) and others found that firms with higher past profits tend to have lower debt ratios. Their evidence, which has been attributed to the Donaldson (1961) and Myers (1984) pecking order of financing preferences, is consistent with tax, transaction cost, and adverse selection arguments that imply that internally generated equity is less costly than equity capital that is raised externally.

(2) Financial deficits: Shyam-Sunder and Myers (1999) found that firms with higher financial deficits, that are firms that raise more external capital, tend to increase their leverage. This evidence is consistent with Myers and Majluf’s (1984) adverse selection model.

(3) Frank and Goyal (2003) examines a larger sample of firms and also found a strong relation between the financial deficits and changes in debt ratios. However, they note that the relation between financial deficits and changes in the debt ratio is stronger for larger and older firms. Since these firms might be expected to be less subject to asymmetric information problems, they argue that their evidence is inconsistent with Myers and Majluf (1984).

(xv) Investor Protection:

Previous studies shows that secure investor rights encourage the development of financial markets (La Porta et al., 2000) and increase firm value (La Porta et al., 2002). Outside shareholders and creditors are willing to pay more, because they recognize that, with better investor protection, greater firm profits can be paid to them as dividends or interest rather than expropriated by the controlling shareholders. These two studies found a
positive association between the creditor protection and capital structure and a negative relation between the shareholder protection and leverage.

Cheng and Shiu (2007) observe that institutions, environments, and firm characteristics are important determinants of capital structure. From a sample of firms across 45 countries, they found that investor protection plays an important role in the determinants of capital structure: firms in countries with better creditor protection have higher leverage, while firms in countries where shareholder rights are better protected use more equity funds. The other differences in institutions and environments also explain the cross-sectional variation in the aggregate capital structure across counties.

(xvi) Credit Ratings:

The study by Kisgen (2006) emphasizes a determinant of capital structure decisions that has received only little attention before the rating of companies by external rating agencies like Moody’s or S and P. Kisgen (2006) analyzes firm financing decisions, when firms are close to rating changes and finds that these firms issue significantly less debt than other comparable firms. Their finding is robust even if one controls for several differing approaches to take “standard” capital structure determinants into account. The findings of their study further supports the empirical testing by Black and Cox (1976); Fischer et al (1989); Mella (1999); Christen et al (2000); Crouhy et al (2000); and Goldstein et al (2001).

(xvii) Competition and Regulatory Changes:

Another potential set of determinants of capital structure decisions is the competitive and regulatory environment of firms. These constitute determinants in the first place, but offer at the same time the possibility to observe shocks to the firm that are exogenous. The classic study by Zingales (1998) illustrates this idea. Zingales (1998) analyzes the impact of financing decisions on the survival of firms in the U.S. trucking industry and concludes
that deregulation induces a huge increase in leverage once competition set in, inducing potentially a high pressure on firms to lower leverage to get back to some optimum.

Zingales (1998) estimates survival rates of firms, controlling for pre-deregulation leverage ratios, firm efficiency, and the *ex ante* default risk. Highly levered firms are less likely to survive the exogenous deregulation shock. As an explanation, among others, firms with high (initial) debt might have fewer possibilities to make investments. Hence, the most efficient firms and the firms with large internal financial resources survive the deregulation.

(xviii) Political Patronage:

Very little is currently known about the determinants of the capital structure of non-western firms in developing or “relationship-based” capitalisms. The potential link between the political patronage and capital structure is an important and unexplored issue. Prior empirical work has provided some insights into the determinants of capital structure, but this evidence is largely based on US firms (e.g., Titman and Wessels, 1988; Harris and Raviv, 1991; Myers, 2001; Hovakimian et al., 2001; Frank and Goyal, 2003; Theylch, 2004). However, Rajan and Zingales (1995) point out the importance of understanding the link between the institutions and capital structure, a view that is also echoed by La Porta et al. (1998) and Johnson and Mitton (2003).

Outside the United States, Malaysia presents an interesting and important case study of relationship-based capitalism. The close link between the business and politics in Malaysia is well documented (example Gomez and Jomo, 1997, 1998; Faccio et al., 2001; Gomez, 2002). The Malaysian government plays the role of political patron to selected firms. It exerts a significant influence over the corporate sector through listing restrictions, direct equity ownership of listed firms, control of the banking sector, and
through government-sponsored “institutional” investors (Gomez and Jomo, 1997).

Fraser et al (2006) extends prior work on the links between the political patronage and capital structure in developing economies. Three proxies of political patronage (economic, social and personal) are developed and applied to a group of Malaysian firms over a 10-year period. They found a positive and significant link between the leverage and each of the three measures of political patronage. They also found evidence of an indirect link between the political patronage and capital structure through firm size and profitability.

**Equity Market Liquidity:**

Liquidity is a major concern for those who trade shares and those who create, manage or regulate trading infrastructure. A growing body of research suggests that liquidity has a much broader relevance. The objective of the research carried out by Shleifer and Vishny (1997) was to examine how the field of corporate governance has arisen to explain, why and when asymmetric information, and the associated agency problems, is managed in the modern firm (Shleifer and Vishny 1997). The major agency problem is that managers and directors may adopt corporate objectives inconsistent with long term maximization of firm value. For example, they may retain excess free cash flow and/or undertake inefficient investments (Jensen 1986, 1989). Of course, managers may directly expropriate the firms’ assets and defraud the shareholders (Johnson et al. 2001).

Stoll and Whaley (1983) first note that stock transaction costs need to be taken into account when valuing equity investments and argue that this may explain the higher required rate of return on small stocks, which are relatively illiquid. Amihud and Mendelson (1986) provide a formal model where transaction costs, like a tax, increase required rates of return for equity investments. They note that this effect can explain a substantial fraction of

Lastly, Lipson and Mortal (2009) examines the relation between the equity market liquidity and capital structure. They found that firms with more liquid equity have lower leverage and prefer equity financing when raising capital.

(xx) Corporate Governance:

The objective of the research carried out by Porta, Lopez-De-Silanes, and Shleifer (1999) was to examine how theoretical analysis of corporate governance delivers counteracting mechanisms of control; the empirical literature sheds light on the role of these counteracting mechanisms, suggesting firm value is an outcome of these mechanisms. As large shareholdings are common in the world, except the US and the UK (Porta, Lopez-De-Silanes, and Shleifer (1999)), it is argued that large share-holders’ incentive to collect information and to monitor management reduces agency costs (Shleifer and Vishny (1986)).

(xxi)Dividend decision:

Bernheim and Wantz (1995) found that the signaling impact of dividends is positively related to dividend tax rates, consistent with a key implication of dividend signaling models that the signaling value of dividends should change with changes in dividend taxation.
Bernheim and Wantz (1995) attempted to outline a research that the signaling impact of dividends is positively related to dividend tax rates, consistent with a key implication of dividend signaling models that the signaling value of dividends should change with changes in dividend taxation.

The study made by Benartzi, Michaely, and Thaler (1997) presents conflicting evidence. They found that the dividends are related more strongly to *past* earnings than future earnings. Further, others have found that there is a significant price drift in the years following the dividends, and it is the large and profitable firms (with less informational asymmetries) that pay most of the dividends which is consistent with the free-cash-flow hypotheses. Support for the free-cash-flow hypotheses is not unqualified, either.

Brealey and Myers (2000) describes this as the cash in and run problem; stockholders can take out the valuable assets, while bondholders are kept in the dark. Bonds are priced under the assumption that dividend policy remains unchanged. Reducing the investments by increasing the dividends will reduce firm value, increase the risk of outstanding debt and harm the bondholders. The stockholders can pay out all the assets and leave the bondholders with an empty shell. As the firm approaches bankruptcy and financial distress is more and more transparent for the firms’ stakeholders, management may chose to play games with the creditors. These games can be played all the time, but stakes are higher near bankruptcy.

Supporting evidence is provided by Grullon, Michaely, and Swaminathan (2002), who found that firms anticipating declining investment opportunities are likely to increase dividends.

Baker and Wurgler (2004) found that managers pay dividends when investors place a premium on dividend-paying stocks and don’t pay dividends when investors prefer non-dividend paying stocks. This suggests that managers are conditioning dividend decisions on their firms’ stock prices.
The study made by Baker and Wurgler (2004) found that managers pay dividends when investors place a premium on dividend-paying stocks and do not pay dividends when investors prefer non-dividend paying stocks. This suggests that managers are conditioning dividend decisions on their firms’ stock prices. And they know that firms consider their stock price to be an important determinant of whether to issue debt or equity (Graham and Harvey (2001), which suggests that capital structure and dividend policy choices may depend on common factors and thus be correlated.

(xxii)Asymmetric Information

Coase (1937) suggested that the neo-classical literature of the firm is consistent with there being one huge firm in the world and also that every division of a firm could be divested to single autonomous firm. Organizations emerged because of market failure, because of asymmetric information between the agents. This asymmetric information between the members gives organizations their reasons for existence.

Williamson (1981) claimed that other reasons for existence are transaction costs and economies of scale and scope. A general employment contract between the firm and the employee reduces the necessary details in a contract compared to contracts that specify exactly the content of the services provided by the employee. Instead the firm can order the employee to perform tasks within a broadly defined area. The organizations are not markets and they are not individuals.

(xxiii)Business Risk:

The study made by Rothschild and Stiglitz (1970) provides empirical evidence to when the investment decision of the bondholders precedes that of the stockholders, it is to the stockholders advantage to choose a distribution of returns with relatively more weight in the upper tail. Rothschild and Stiglitz (1970) have shown that increasing the investment in the risky project is
equivalent to increasing the mass in the tails of the distribution of total return. How likely is this theory to have any effect in practice? Do lenders care about the possible asset substitution when contemplating a loan to a firm? In the loan application process the investment objects and future strategy is certainly a talking point. The problem is that it is almost impossible to construct a contract where the borrower cannot renegade and invest in something more risky. That might not even be in the best interest of the lender either. If firm management sees a better investment project than the one they originally lent money for, should they not invest because the loan contract has restrictions on the possible investments? It is likely that it is better to control management incentives through stock options and stock market monitoring than through costly restrictions in the loan contracts. The risk-shifting incentive problem can be controlled through restrictions in the loan contract and through management incentives. But such monitoring is costly and with uncertain effects. It is therefore likely that lenders seek to insure themselves to an increase in business risk.

Myers (1977) provides a model under which debt causes under-investment (asset substitution). Firms reject those profitable, low risk investment projects that have the possibility of passing on benefits from shareholders to lenders. Further, internal financing is cheaper than external debt or equity financing due to asymmetric information. Higher debt makes higher output costly for a levered firm. In a competitive market, unlevered or low-levered rival firms will intensify competition by increasing their output and/or lowering prices. If the levered firms continue borrowing to meet the competition, they may face financial distress and bankruptcy. Hence, the pecking order/asymmetric information theory predict a negative relation between the capital structure and market power.
Agency cost:

Warner (1977) argues that the potential bankruptcy costs a firm might face are reflected in its share price and this is taken into consideration by investors when they make investment decisions. Bankruptcy costs refer to the costs associated with declining credit terms with customers and suppliers. It can be argued that suppliers would not be willing to give long term credit terms to the firm as the latter faces the risk of default and similarly, customers would avoid buying products and services from a firm facing a high risk of default since warranties and other after sales services will be void or at risk.

Jensen and Meckling (1977) argue that the shareholders-lenders conflict results into risk shifting and wealth appropriation in favour of shareholders as they take on risky investment projects (asset substitution). Hence, shareholders and managers, as their agents, are prompted to take on more borrowing to finance risky projects. Lenders would receive interest and principal if projects succeed, and shareholders would appropriate the residual income. However, lenders would lose if project fails. It is difficult and costly for debt holders to be able to assess and monitor risky projects. Even debt covenants may not be able to protect them. In terms of the product-market decisions, the implication of the agency theory is that firms would borrow more to pursue an aggressive production policy that would benefit shareholders.

Grossman and Hart (1980) suggest that debt is a disciplinary device that may be used to reduce the agency costs of free cash flow. However, as Myres (1977) demonstrates, debt can also have undesirable effects such as inducing managers to forego positive net present value projects.

Jensen and Ruback(1983) attempted to articulate a model to explain how the manager who is responsible of running the firm tends to achieve his personal goals rather than maximizing returns to the shareholders. This means that managers will use the excess free cash flow available to fulfill his
personal interests instead of increasing returns to the shareholders (Jensen and Ruback, 1983). Hence, the main problem that shareholders face is to make sure that managers do not use up the free cash flow by investing in unprofitable or negative net present value (NPV) projects. Instead these cash flows should be returned to the shareholders, for example though dividend payouts (Jensen, 1986).

Williams (1988) have also studied the capital structure problem when there is more than one firm in the model. An agency problem occurs where a firm has to choose between the two technologies. One labour intensive and one capital intensive are the two available technologies. If the entrepreneur invests in the labour-intensive technology, he may consume some of the investment proceeds from external financing. The capital-intensive technology is assumed to give higher returns than the labour-intensive technology. Debt can then be used to control management incentives by setting the debt level so high that an investment in labor-intensive industry is not feasible. An important conclusion from the industrial equilibrium literature is that several financing arrangements may coexist at the same time. Large capital-intensive firms with high debt levels may coexist with smaller and marginally profitable firms that are having lower levels of debt. Williams (1988) model could therefore explain the large heterogeneity of debt ratios observed in the data.

Pinegar and Wilbricht (1989) discovered that principal-agent problem can be dealt with to some extent through the capital structure by increasing the debt level and without causing any radical increase in agency costs. Similarly, Lubatkin and Chatterjee (1994) argue that increasing the debt to equity ratio will help firms ensure that managers are running the business more efficiently. Hence, managers will return excess cash flow to the shareholders rather than investing in negative NPV projects since the managers will have to make sure that the debt obligations of the firm are repaid. Hence, with an increase in debt level, the lenders and shareholders
become the main parties in the corporate governance structure. Thus, managers that are not able to meet the debt obligations can be replaced by more efficient managers who can better serve the shareholders. This means that leverages firms are better for shareholders as debt level can be used for monitoring the managers.

Titman and Wessels (1988) found that agency costs and suboptimal investments lead growing firms to have less debt. Large firms are likely to be more diversified and less prone to bankruptcy (Rajan and Zingales, 1995). They are also expected to incur lower direct costs in issuing debt or equity. Thus, large firms are expected to employ higher amount of debt than small firms. It is also argued that smaller firms would have less long-term debt and more short-term debt because of shareholders-lenders conflict (Michaelas et al., 1999; Titman and Wessels, 1988; Stohs and Mauer, 1996). The empirical evidence is mixed. A large number of studies found a significant positive relation between the size and debt ratio (Lasfer, 1995; Rajan and Zingales, 1995; Barclay and Smith, 1996; Berger et al., 1997). Kester (1986) and Remmers et al. (1974) found no significant effect of size on capital structure. Some studies reveal a positive relation between the size and debt maturities (Barclay and Smith, 1996; Stohs and Mauer, 1996; Michaelas et al., 1999). It has also been shown that the relationship between the size and Capital structure is sensitive to the chosen method of estimation (van der Wijst and Thurik, 1993; Barclay et al., 1995).

**Tangibility:**

The study presented by Harris and Ravi (1991) is a summary of the various aspects related to their review of the capital literature noted that it is generally accepted that firms in a given industry have similar proportions of individual assets and liabilities. They have summarized findings of four studies, Botheyn and Daely and Huber (1982), Bradley, Jarrel and Kim (1984), Long and Matiz (1985) and Kester (1986), which investigated...
leverage ratios for selected industries. These studies all found that specific industries have a common leverage ratio which, over time is relatively stable.

The study presented by (Myers, 1977) suggests that Investment opportunities represent a firms’ intangible value that does not have collateral value. The intangible value is likely to be lost if financial distress takes place. The risk of under-valuation and resource diversion is quite high for firms with high intangible value (Myers, 1977). These arguments suggest a negative relationship between the debt ratio and investment opportunities. But the agency problem may be lower for short-term debt than long term debt (Myers, 1977; Barclay and Smith, 1996 and 1999; Michaelas et. al. 1999). Balance sheet does not capture the future investment opportunities rather share price reflects them. Therefore, market-to-book value ratio is used as a proxy for investment opportunities. Empirical evidence on the relationship between the investment opportunities (reflected through market-to-book value ratio) and capital structure is not conclusive. Studies confirming a negative relation between the investments opportunities and long-term debt or total debt ratios include Titman and Wessels (1988), Barclay et. al. (1995) Lasfer (1995), Rajan and Zingales (1995) Barclay and Smith (1996). However, Michaelas et. al. (1999) reports a positive relation of investment opportunities with long-term and total debt ratio as well as with short-term debt ratio. Stohs and Mauer (1996) and Barclay and Smith (1996) found negative relationship between the growth opportunities and all types of debt.

According to trade-off hypotheses, tangible assets act as collateral and provide security to lenders in the event of financial distress. Collaterality also protects lenders from moral hazard problem caused by the shareholders-lenders conflict (Jensen and Mekling, 1976). Thus, firms with higher tangible assets are expected to have high level of debt. According to the maturity principle, net fixed assets shift financing from short-term-debt to long-term debt while inventory shifts financing from equity to short-term-debt and long-term debt (Thies and Klock, 1992). As regards the empirical evidence, some
studies report a significant positive relationship between the tangibility and total debt (Titman and Wessels, 1988; Rajan and Zingales, 1995). There are other studies that found a positive relationship between the tangibility and long-term debt, but a negative relationship between the tangibility and short-term debt (van der Wijst and Thurik, 1993; Chittenden et. al., 1996; Stohs and Mauer, 1996).

Irina and Maria (2008) study focused on the capital structure decision in the BRIC countries. It was not a country-specific study with a focus on India. The authors applied a multistage research model to a set of large non-financial firms from Russia, Brazil and China. They found, like previous studies, that the impact of determinants of capital structure differs within national samples. They showed that when comparing large-scale Russian firms to Brazilian firms the opposite impact was noticed in terms of the influence of tangibility of assets and the firm size. At the same time, they found similar influences of determinants between the Chinese firms and Brazilian firms.

(xxvi)Tax benefit:

According to the interest tax shield hypotheses, which are derived from Modigliani and Miller (1963), firms with high profits would employ high debt to gain tax benefits. On the contrary, the pecking order or asymmetric information hypotheses of Myers (1984) and Myers and Majluf (1984) postulates that companies prefer internal financing to debt to equity. Firms with higher profitability will employ higher retained earnings and less debt. The interest tax shield hypotheses may also not work for those firms that have other avenues, like depreciation, to shield their taxes (DeAngelo and Masulis, 1980). Most empirical results confirm the pecking order hypotheses (Kester, 1986; Titman and Wessels, 1988; Rajan and Zingales, 1995; Michaelas et. al., 1999).
The study by Modigliani and Miller (1963) is yet another corporate finance theory that justifies the use of high debt is the tax-shield theory (Modigliani and Miller, 1963). Profitable firms borrow more to save taxes since interest costs are tax deductible. The output maximization by oligopoly firms is supposed to increase their profitability. Hence, both the agency cost theory and the tax-shield theory would predict a positive relationship between the capital structure and market structure. Capital structure increases the chances of financial distress and bankruptcy. Firms face costs of financial distress when they are unable to service debt. They will have high debt ratios if these costs are zero or trivial (Scott, 1976; Kim, 1978). Since costs of financial distress are non-trivial and high levered firm can actually go bankrupt, firms with high probability of bankruptcy will have low debt ratio. The chances of bankruptcy for firms with large reserve funds will be relatively less, but unlevered firms with high profitability and large reserve funds would have great competitive advantage. These firms with “deep purse” may not only survive but they would also gain by driving their rival firms into bankruptcy (Brander and Lewis, 1986; Bolton and Scharfstein, 1990). These firms follow a policy of aggressive production and predatory price cut to eliminate their rivals by forcing them into financial distress. Their strategy pays them off particularly when external funding is not available to firms of the target predatory price behavior. The implication of this model is that the unlevered firm with deep purses (high profitability and reserve funds) would have incentive to increase output to drive the competitors into bankruptcy. Empirically, they can predict a negative relationship between the capital structure and market structure.

Building on Lev’s study, Mandelker and Rhee (1984) empirically lends support to the conjecture that firms engage trade-off between the operating leverage and financial leverage and argued that due to this trade-off a firms’ industry may have some influence on capital structure decisions. Bradley, Jarrel and Kim (1984) found that the volatility of earnings is a strong inverse
determinant of debt and that earnings volatility may be industry related, this may also affect the relationship the industry membership and capital structure decisions.

In Latin America the situation may be quite different. La Porta et al. (1997, 1998, 2000) report that the legal systems firms face differ significantly around the world, in part, because of their home countries' legal origins. They argue that investors are less protected in French Civil Law countries, compared to countries with Common Law origins. All countries in Latin America have the same legal origin, which is French Civil Law. Chong and López-de-Silanes (2007) show that in Latin America, whose countries offer less investor protection than average French Civil Law countries, investors' expropriation risk is more severe, the cost of capital is higher, firms pay less in dividends, and, in general, the level of financial development in the region is very low.

According to the trade-off theory, higher risk (earnings volatility) increases the probability of financial distress. Thus, it predicts a negative relationship between the leverage and risk. However, it is shown that for a negative relationship between the risk and leverage, bankruptcy costs should be quite large (Castanias, 1983; Bradley, Janell and Kim, 1984). Further, Thies and Klock (1992) argue that risk has negative relationship with long-term debt but positive relationship with short-term debt as high variability shifts financing from long-term debt to short-term debt and equity. Empirical results do not provide an unequivocal answer to the relationship between the risk and capital structure. Bradley, Janell and Kim (1984) found an inverse relationship between the earnings variability and leverage. But Titman and Wessels (1984), Auerbach (1985) and Ferri and Jones (1979) found no association between the earnings variability and leverage.

Frank and Goyal’s (2003) and Booth et al’s (2001) surveys suggest that capital structures of firms arise from the various theories such as static trade-
off and pecking order theory. Farhat et al.(2009) conducted a test of the pecking order and trade-off theory and concluded that Indian firms follow the trade-off theory. In a static trade-off framework, the firm is visualized as setting a particular target leverage ratio and adjusting their debt/equity accordingly to take advantage of various benefits associated with leverage. Recent studies suggest that the trade-off theory predictions about profitability are more complex than those based on static models (Strebulaev, 2007). Because of the lack of consensus on the determinants of capital structure, Myers (2003) argues that no universal theory of capital structure exists, and there is no reason to expect one. They have useful conditional theories, however, each factor could be dominant for some firms, or in some circumstances, yet unimportant elsewhere.

The study by Fama and French (2004) have provided direct evidence against the pecking order hypotheses and concluded that these hypotheses cannot explain capital structure choices. They found that equity issues are not as infrequent as the pecking order hypotheses predicts, and that between the 1973 and 2002 the annual equity decisions of more than half the firms in their sample violated the pecking order. These empirical studies on dividend policy and capital structure raise the obvious question: why do firms work with lower leverage and dividend payout ratios when their stock prices are high?

Berger and Bonaccorsi di Patti (2006) stipulates that more efficient firms are more likely to earn a higher return for a given capital structure, and that higher returns can act as a buffer against portfolio risk so that more efficient firms are in a better position to substitute equity for debt in their capital structure. Hence, under the efficiency-risk hypotheses, more efficient firms choose higher leverage ratios because higher efficiency is expected to lower the costs of bankruptcy and financial distress. In essence, the efficiency-risk hypotheses are a spin-off of the trade-off theory of capital structure whereby differences in efficiency, all else equal, enable firms to fine tune their optimal capital structure.
Farhat et al (2009) presents and test the trade-off and the pecking order models under a range of institutional environments. They found that civil law countries follow the pecking order model and rely more on internally generated funds. Based on the empirical results, they believe the common law countries follow the trade-off theory and in India, being a common law country, the firms follow trade-off theory.

2.2 INDIAN STUDIES

With regard to empirical research on capital structure in India, an observable trend is that there is no methodical research and many of the studies representing as the most important are geographic-centric, industry-centric or limited scope-centric.

The purpose of the study by Sharma and Rao (1968) was to employ the Modigliani and Miller’s hypotheses under Indian conditions to a non-regulated industry and to test the influence of the debt on the value of the firm. They employed two-stage least square method on the data of thirty Indian engineering firms for three years namely, 1942, 1964 and 1965. In their estimate, the leverage variable has a co-efficient greater than the tax rate. Thus, agreeing with the traditional view they concluded that the cost of capital is affected by debt apart from its tax advantage.

Pandey (1981) carried out a study with the objective of testing the relationship between the capital structure and cost of capital using data from the Indian corporate sector. The samples consisted of 47, 32, 32 and 20 respectively for cotton, chemical, engineering and electricity. He concluded that the results of the study did not support the contention of Modigliani and Miller that the average cost of capital was not affected by the capital structure changes and also that the cost of equity increased linearly with leverage. The traditional view that the cost of capital declines with leverage even in the absence of tax advantage of debt financing was strengthened by the study.
The study by Khandelwal (1987) examined the profitability in relation to the capital structure of large and small units and the sample units numbered 14 and 24 respectively. The relevant data are collected from annual reports of sample companies. The researcher also met the executives of the sample companies for collecting information. Analytical tools like ratio analysis, trend analysis, common size analysis, correlation, central tendency, etc., are used by the researcher to analyze the collected data. He found that the value of a firm and its cost of capital are independent of each other and the capital structure of large units was more efficient than small units.

Hanoa (1990) concludes that the sample units had optimal capital structure and working capital requirements are met by short term finance provided by banks and financial institutions. The capital structure of co-operative sugar mills differed from joint stock sugar mills. The single industry study did not look into the effect of cost of capital on the capital structure.

The results of the study by Matta (1990) revealed that three variables, viz., industry, size and growth are the significant determinants of financial structure. The empirical findings of the study supported the researcher’s hypotheses of capital structure's dependency on growth, size and industry, though in some cases, the results are not as favorable as expected.

Mrs. Subarna Sarkar (1991) concluded that a greater debt oriented financing in public sector enterprises over all the period and the positive trends of private sector companies shows that such profits are retained in business for augmenting the resources. The level of leverage directly reflects the distribution of capital structure. The total coverage and structural ratio of private sector companies has been better than public sector which shows a better ability of the private sector to meet its fixed obligations while the negative trends of public sector enterprises shows that such enterprises had earned that has been eaten up by huge amount of debt to total capitalization. Capital productivity measures indicate the changes in the use of capital per
unit of output which was influenced by a large variety of factors many of whom are beyond the control of individual enterprises.

Mrs. Yesoda Devi (1992) concluded that the extent of relationship between the capital structure and cost of capital varied from company to company. The weighted average cost of capital was sensitive not only to the proportion of capital components but also to earnings per share, retaining ratios as well as market price of the shares. Debt equity ratio was one of the factors which affected the cost of capital.

The study by S Narayan Rao and Jijo Lukose P. J. (1992), 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 imply 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 became significant factors influencing the capital structure during post-liberalization period.

Rajan (1992) looks into the question of trade-off between the bank debt and arm’s length debt. Since the bank can monitor the firm and control its investment decisions, it would in effect alter the division of surplus between itself and the firm. So the firm might prefer debt from arm’s length sources, which involve neither the benefits nor costs of the bank debt.

The study by Ganeshan (1993) found that North Indian Enterprises have lower leverage than South Indian Enterprises because of higher levels of professionalism in management and equity culture in investors. It is important to note that even though the researcher includes an enquiry into managerial
perceptions towards capital structure decisions in the scope of the study, the researcher has not made any attempt to include this issue in the study.

Ms Rajeshari Rao (1994) concluded that the process of capital structure planning was not a one time job, but needed revision and monitoring through time in different situations. Her conclusion also clearly exhibit that finance executives of state enterprises are not paying adequate attention to the multidimensional implications of the capital structure decisions.

Bhaduri(1990-1995) undertook a comprehensive validation of a study consisted of 163 firms collected across nine broad industries over the period of 1990-1995 and is drawn from the Centre for Monitoring Indian Economy (CMIE) database. Bhaduri mentioned limitations of her study and the main limitation relates to a moderate level of ‘goodness of fit’ which implies that one needs to incorporate more variables to increase the explanatory power of the model.

The study by Dhankar and Bora (1996) conclude that (i) there is no significant relationship between the capital structure and the value of a firm; (ii) companies differ significantly in capital structure irrespective of whether they belong to same industry group or different groups; (ii) change in capital structure and cost of capital is found to be negatively related, but the results are not significantly significant; and (iv) companies do not have a definite way of determining optimal capital structure.

The study by Kotreshwar (1996) found that the capital formation in Indian corporate sector is affected due to tax discrimination against equity finance vis-à-vis debt finance. To overcome this problem, he recommends that the tax base should be changed to cash flow basis.

Majumdar and Ahuja (1998), discuss the relationship between the levels of debt in the capital structure and firm performance. While existing theory posits a positive relationship, Indian data reveals a negative
relationship. As supply of loan capital is government owned, they support privatization to increase economic efficiency of firms. Chibber and Majumdar (1998), Chibber and Majumdar (1999) examine the influence of foreign ownership on performance of firms operating in India using accounting measures of performance in cross sectional data analysis. Rather than capturing ownership variation through looking at categories such as domestic versus state ownership or joint ventures versus solely owned subsidiaries, they look only at ownership variations that have a legal basis in Indian Companies Act of 1956. They found foreign ownership to have a positive and significant influence on various dimensions of firm performance, but it does so, only when it crosses a certain threshold limit, which is defined by the property rights regime.

The objective of Shyam-Sunder and Myers (1999) is to test static trade-off against pecking order models of capital structure. The study is aimed at checking the applicability of the simple trade-off model as against the pecking order hypotheses. The conclusions of the study are that the pecking order is an excellent first-order descriptor of corporate financing behavior. Overall the results would suggest a greater confidence in the pecking order theory than in target adjustment.

Khanna and Palepu (2000) argues that since emerging market economy like India have poorly functioning institutions, this may lead to sever agency and information problems. These problems make it costly for firms operating in India to acquire necessary inputs such as finance, technology, and managerial skills. In such context, group firms can use their reputation and record of accomplishment to mitigate information problems. Moreover, firms affiliated with business groups can benefit from access to internal capital markets.

Bhaduri (2002a) opines that the existing empirical research on capital structure has been largely confined to the United States and a few other
advanced countries. She attempts to study the capital structure choice of Less Developed Countries (LDCs) through a case study of the Indian corporate sector. The objective is to develop a model that accounts for the possibility of restructuring costs in attaining an optimal capital structure and addresses the measurement problem that arises due to the unobservable nature of the attributes influencing the optimal capital structure. The evidence presented here suggests that the optimal capital structure choice can be influenced by factors such as growth, cash flow, size, and product and industry characteristics. The results also confirm the existence of restructuring costs in attaining an optimal capital structure.

In contrast to previous empirical work on capital structure, which is mainly confined to the United States and a few other advanced countries, the study by Bhaduri (2002b) attempts to study the capital structure choice of developing countries through a case study of the Indian corporate sector. The study shows that the optimal capital structure choice is influenced by factors such as growth, cash flow, size, and product and industry characteristics.

Bhaduri (2002) developed a model that accounts for the possibility of restructuring costs in attaining an optimal capital structure and address the measurements problem that arises due to the unobservable nature of attributes influencing the optimal capital structure.

Raju Majumdar (2003) study examines the determinants of debt maturity structure decisions, using a sample of companies chosen from two broad indices, viz., BSE 500 and the CNX 500 index. The study results suggest that collateralizable assets and leverage are the important determinants of debt maturity choice. Size and firm quality have the predicted effect on debt maturity; however, results are statistically significant only in the case of fixed effect firm and time model. It found no evidence of the impact of effective tax rate, asset maturity, and growth prospects on debt maturity in the Indian context.
Frank and Goyal (2003) tests the pecking order theory on a wide range of publicly traded securities in US for 1971 to 1978. They say “Contrary to the pecking order theory, net equity issues track the financing deficit more closely than do net debt issues. While large firms exhibit some aspects of pecking order behavior, the evidence is not robust to the inclusion of conventional leverage factors, or to the analysis of evidence from the 1990s. Financing deficit is less important in explaining net debt issues over time for firms of all sizes.

Raju Majumdar paper analyzes the relation between the growth opportunities and corporate borrowing using a panel date regression model, on a sample of 317 Indian firms covering the period 2004-2008. Isolating the components of growth in terms of growth of assets already-in-place and the present value of future growth opportunities has yielded statistically significant results that point to the possibility of misspecification of independent variables as a possible reason behind the earlier findings. Study findings conform to the theoretical explanation that firms with high market-to-book ratios have higher costs of financial distress and hence long-term borrowing and growth opportunities are inversely related even in the Indian context as it is elsewhere.

Kumar (2004) provides detailed discussion on this issue and provided an explicit test to justify the inclusion of firm-fixed effects in both forms, namely, in terms of control variables as well as in terms of ownership structures. The study provides an explicit F-test for presence of fixed effect for control variables, ownership structure, separately as well as jointly. Percentage shareholding of different investors may be correlated, because, share ownership by Foreign, Institutional, corporate and director, along with the shares of ‘other top 50 shareholders and ‘others not included above’ adds up to ‘100’ percent. In order to avoid the problem of multicollinearity, this study uses only four main shareholders, i.e. foreign, institutional, corporate, and director. In a recent study for India, Kumar (2004), found that corporate
governance significantly influences the firm performance. Corporate ownership structure can act as an incentive device for reducing the agency costs associated with the separation of ownership and management can be used to protect property rights of the firm.

Santi Gopal Maji and Santanu Kumar Ghosh (2004) investigate whether the Static Trade-off or Pecking order theories explain the capital structure of Indian companies. The analysis is based on 160 Indian companies selected from nine manufacturing sectors for a period of 14 years from 1990-91 to 2003-04. The results indicate that neither the trade-off nor the pecking order theory fully explains capital structure—though evidence provides support in favor of the trade-off theory.

Paritosh Chandra Sinha and Santanu Kumar Ghosh (2006) in examining the adjustment speed in the dynamic capital structure choice of the firms, the present study utilizes a dynamic partial adjustment model (PAM), and extends the work of Drobetz and Wanzenried (2006). The study explores whether firms’ recapitalization policy allows dynamic adjustments in leverage revision through two decision variable – the target leverage and the adjustment speed. The study found that firms’ dynamic recapitalization is subject to changes in the firm specific as well as macroeconomic variables, where both the target and the adjustment speed are determined by firms’ reactive and/or proactive adjustment behaviors.

Kiranjit Sett and Jaydeb Sarkhel (2007) assume that firms operate in a perfect and frictionless capital market; Modigliani and Miller (1958) argue that the value of firm is independent of its capital structure. But other researchers argue that financial leverage depends on firm, industry and country-specific factors. As an economy transforms itself from an agro-based one to an industry and services-based one, the orientation of its financial system may also change. The orientation of the financial system and macroeconomic variables are expected to affect the sources of finance and the
costs and benefits associated with different forms of financing. Their paper examines the effect of the financial system and macroeconomic variables on the financial leverage of the Indian non-financial private corporate sector during the period 1981-2007, it is found that financial leverage is negatively related to stock market development and positively related to banking sector development, rate of inflation and effective rate of corporate tax.

The study made by M. Gunasekaran(2008) says that major factors influencing the capital structure in Indian industries are collateral value of assets and liquid assets in aluminum industry, corporate size, liquid assets and business risk in automobile industry, growth rate and liquid assets in cement industry, profitability and trading on equity in chemical industry, business risk and debt service capacity in electronics industry, trading on equity in engineering industry, trading on equity, asset structure and corporate size in I.T. industry, collateral value of assets in leather industry, liquid assets and assets structure in paper industry, assets structure, profitability and corporate taxes in pharmaceuticals industry profitability, trading on equity and assets structure in steel industry and trading on equity, liquid assets and asset structure in sugar industry. All the components of capital structure have significant relationship with other components of capital structure. Reserves and surplus is having significant negative relationship with equity share capital, debentures and long term debt. There is significant difference between the industries with respect to preference share capital, equity share capital and debentures. As regards the components the difference between the industries is not significant. The variation in the components of capital structure among the public ltd companies is less than the private sector companies. The collateral value of assets has maximum influence on the capital structure among the public sector companies and asset structure has similar preference on capital structure among the private sector companies.

According to J Dennis Rajakumar(2008) survey aims to provide a review of studies of corporate financing pattern and investment behavior in
India. As the development of financial system was powered by state’s initiatives, a majority of the studies had examined if corporate had created excess reliance on financial institutions and thereby had a major claim on the financial resources. Most of the studies of investment behavior used three different frameworks, namely, profit, accelerator principle, and flow of funds or availability of funds. Econometric exercise used both time series and cross-sectional data. A majority of the studies covered the period prior to 1991, when the private corporate sector was subjected to several regulations and controls. With the ushering in of neo-liberal policies that assigned a lead role to corporate sector in the development process of the economy since 1991, there have been significant changes with respect to firms’ financing choices as well as factors underlying their investment decisions. Their survey, thus, points to the need for fresh enquiry into the nexus between the corporate financing and their investment decisions so as to understand two vital questions, assuming significance in the changed milieu, namely whether financing constraints exist may potentially check corporate investment; and whether corporate financial practices impact on the workings of financial market.

The study by Dr. Ashok Kumar Panigrahi (2008), aims to understand the importance of location of the firm in making capital structure decisions of Indian companies. They analyze the capital structure of 100 Indian private sector companies, comprising of 10 different sectors, duly grouping them on the basis of their regions in which they are located. In their study, they try to find out the ways in which different companies at different times and in different institutional environments have financed their operations; and to identify possible implications of these financing patterns. The central issue they address is to examine the location variable that influence the capital structure decision of Indian companies and check whether the region to which the company belongs has a bearing on its capital structure or not. As a result, firms with the largest information asymmetries will have more debt and less
equity in their capital structure. By analyzing the inflow of funds for individual regions, it is observed that the quantum of inflow was more in case of western region companies in comparison to other region. The average amount of funds raised by the sample companies of eastern region was Rs.1832.76 crores, western region Rs.22205.46 crores, northern region Rs.5772.78 crores and southern region Rs.16939.08 crores. The annual average inflow of funds per company was Rs.53.90 crores, Rs.164.48 crores, Rs.125.49 crores and Rs.199.28 crores respectively for eastern, western, northern and southern region companies. This reveals that in terms of total average inflow of funds, western region stood highest as this region is the most industrially advanced region of our country and covers 100 companies out of the total sample size of 150 companies. In terms of mean average southern region has the highest inflow of funds as compared to other regions because most of the large sized companies are situated in this region, which are capable of generating more funds as compared to the companies of other region. Thus, the results as calculated in forgoing paragraphs indicate that the average figures and ratios are different for all the regions. Hence, it is concluded that the region or location of a company strongly influences the quantum of inflow of funds.

According to Sulagna Mukherjee, Jitendra Mahakud(2008), they are the first of its kind to study both the determination of target capital structure and the speed of adjustment to target capital structure in the context of Indian companies. Firm specific variables like size, tangibility, profitability and market-to-book ratio are found to be the most important variables which determine the target capital structure across the book and market leverage and the factors like size of the company, growth opportunity and the distance between the target and observed leverage determine the speed of adjustment to target leverage for the Indian manufacturing companies.

The study by Hoshrav M. Patel (2009) presents an empirical analysis on the capital structure decisions of group-affiliated and non-affiliated firms
in India. They consider the impact of group-affiliation on debt levels in the context of various capital structure theories, and hypothesize that group-affiliated firms carry higher levels of debt on their balance sheets. They have used a sample of firms drawn from the Bombay Stock Exchange 500 Index. Through univariate and multivariate analyses they conclude that their hypothesis is incorrect, and that group-affiliated firms have levels of leverage that are not significantly different from the levels exhibited by standalone firms. This leads them to conclude that no particular capital structure theory has a dominant impact on the leverage of group affiliated firms vis-à-vis non-group affiliated firms. They hypothesize that this is due to firms’ endeavors to improve corporate governance standards and thus improve transparency and avoid intra-group and cross-subsidization transactions. This implies that they behave more like standalone companies and exhibit similar characteristics. They also hypothesize that the proliferation of credit in Indian markets has increased access to external financing for all firms. Group-affiliated firms that used to have better access to financing do not hold a significant advantage over its standalone counterparts due to the easy availability of credit.

The study made by Yamini Agarwal (2009) further assess the relevance of existing models such as NI, NOI, signaling theory, pecking order theory, sensitivity model, scenario analysis and decision tree analysis; Mathematical programming techniques such Linear programming, Integer programming and Goal programming to give a model framework that satisfies multiple objectives simultaneously. Upon evaluation, model specification identified Goal programming technique (Agarwal (1976,1988) identified it for capital budgeting decisions) as a model for capital structure decisions under multiple objectives.