CHAPTER II

Review of literature

Review of literature

This topic deals with the literature review of capital structure. Capital structure study has been identified important area in finance and studied earlier in detail in different perspective. These studies discusses on finding out optimum combination of debt equity, value of firm, financing pattern, taxation, free cash flows, agency cost and factors that determine the capital structure of the firm. The review of earlier literature increases a detailed knowledge of different aspects of capital structure research that has been carried out by earlier researcher. Section I of the topic studies capital structure theories and section II comprises review of earlier studies on determinants of capital structure.

Section I – Review of capital structure theories

1) **Net income approach**
2) **Net operating income approach**
3) **M & M – Without taxes**
4) **M & M – With taxes**
5) **Free cash flow theory**
6) **Agency cost of theory**
7) **Trade off model**
8) **Pecking order theory**
9) **Market timing theory**

1) Net Income Approach

Net income approach (NI) theory of capital structure was proposed by David Durand. NI approach shows relationship between leverage, cost of capital and value of a firm. David Durand's theory states that there is a relationship between capital structure and value of firm. Therefore the firm can affect its value by increasing or decreasing the debt proportion in its financing mix.

NI approach of capital structure is based on following assumptions:-

i)   Corporate tax does not exist.

ii)   Capital requirement of the firm are given and remain constant.

iii)   Cost of debt (K_d) and Cost of equity (K_e) remain constant.

iv)   Cost of debt (K_d) is less than Cost of equity (K_e)

v)   Increase in financial leverage does not change risk perception of the investors.

As K_d is less than K_e, increasing use of cheaper debt in financing mix result in decreasing overall cost of capital (k_o). As firm increase debt in its capital structure , it will lead to decrease in K_o and reduced K_o will magnify returns available to shareholders. The increased returns to the shareholders will increase total value of equity and market value of firm. When firm reduces debt in its capital structure K_o will increase and reduce returns available to the shareholders and market value of firm.

The relationship between the degree of leverage and cost of capital is presented graphically in figure no2.1.
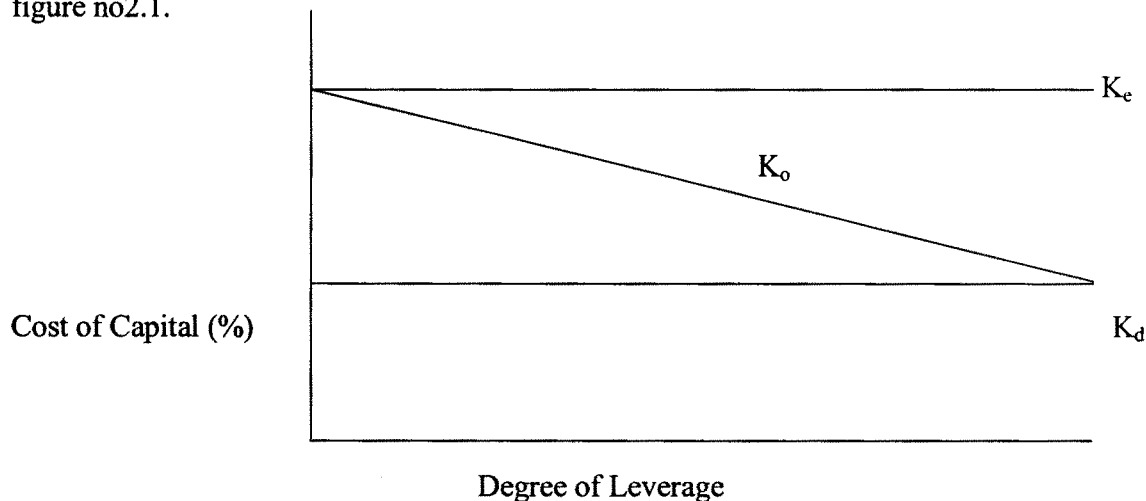

Cost of Capital (%)

Degree of Leverage

Figure No.2.1- Relationship between degree of leverage and cost of capital

The above figure no 2.1 shows that the K_d and k_e are constant at all levels of degree of leverage. As debt financing increases, K_o decreases as cost of debt is less than cost of equity and this result in increased value of a firm. Under NI approach, the firm will have the maximum value at a point where K_o is minimized. Firm can achieve an optimal capital structure by judicious use of debt and equity (R.P. Rustogi, 2005).

2) Net operating income approach

Net operating income (NOI) theory is also propounded by David Durand, this theory of capital structure states that firm's capital structure does not affect market value of the firm. The value of the firm is independent of capital structure. The firm's value depends upon investment decisions

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rather than financing decisions and firm's financing and investment decisions are supposed to be independent of each other. So one capital structure is as good as another and there is no optimal capital structure.

According to the theory, the financing decisions of the firm does not affect average cost of capital of the firm, hence the value of the firm remain unchanged with changes in debt equity proportion. The theory states that the value of the firm depends upon its operating income and business risk and not the way it finances the operations. The changes in debt and equity only realign the risk and return to the investors and do not alter the total return and total risk of the firm which impacts the total value.

NOI approach of capital structure is based on the following assumptions :-

1) K_o is constant for all level of debt equity mix
2) The value of the firm is independent of capital structure mix
3) Capital market are efficient
4) Zero tax environment

The main postulate is that market does not evaluate the firm's value on the basis of its capital structure. An increase in debt proportion due to low cost of debt results in an increase in the cost of equity. The firm increases the amount of debt because it is cheaper, so as debt proportion increases the financial risk of the firm too. The equity shareholders require greater return to compensate the increase in risk their investment is exposed to. Below figure no. 2.2 shows that, as cost of equity increases as the cost of debt decreases. The increase in K_e is exactly sufficient to offset the effect of increased importance K_d, so K_o remains constant (R.P. Rustogi, 2005).
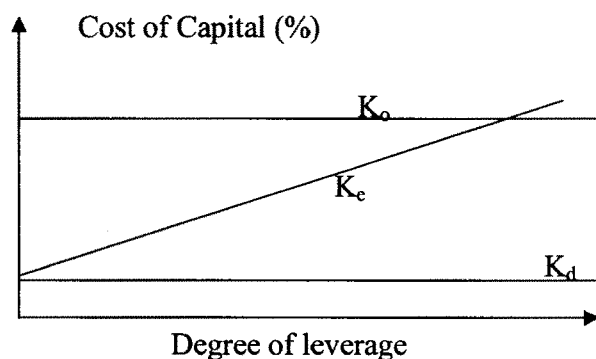

Figure No. 2.2 – Relationship between degree of leverage and cost of capital

3) M&M – Without Taxes

Franco Modigliani and Merton Miller (MM) made a classic contribution to explain the capital structure. Their theory of capital structure provides behavioral explanation to that capital structure is immaterial to the value of the firm. The question is what combination of debt and equity would maximize the value of firm. MM provides the answer through the following propositions

Proposition I

MM's proposition I without taxes implies that capital structure is irrelevant. The value of levered firm and unlevered firm would be equal. The total value of the firm remains the same as determined by its assets no matter how they are acquired. It is only nature of claims on the earnings that changes with changing debt ratio, the capital structure. The value of the firm remains constant no matter how the earnings are shared between debt holders and shareholders. Denoting a firm financed entirely by equity as ' unlevered firm' and the firm using some debt as ' levered firm' and the market values of unlevered and levered firm as V_U and V_L respectively ,then according to MM's Proposition I

$$V_U = V_L$$

The value of levered firm equals to the value of unlevered firm.

Proposition II

MM's Proposition II without taxes, states that with increasing leverage the cost of equity rises exactly to offset the advantage of reduced cost of debt to keep the value of the firm constant. Proposition II specifies the expected return on equity as , the expected yield on equity capital is equal to the pure equity return plus a premium for financial risk which is equal to the spread between pure equity return and cost of debt in the proportion of debt equity ratio. The average cost of capital of any firm is independent of capital structure. This capitalization rate will be equal to the expected returns from the assets if they were financed entirely from equity. Let us call this pure equity return r_o. Even though total value remains constant the debt equity ratio causes important changes in the value of debt and equity. The cost of equity in the levered firm r_e will increase as the leverage increases, thereby changing the value of equity. It is given by following equation

$$r_e = r_o + (r_o - r_d) \ D/E$$

Hence, the cost of equity r_e depends upon the required return on asset r_o, the required return by debt holders and the debt equity ratio D/E. The cost of equity is a linear function of debt equity ratio with the slope given by difference of the asset capitalization rate and the cost of debt as depicted in following figure no. 2.3.
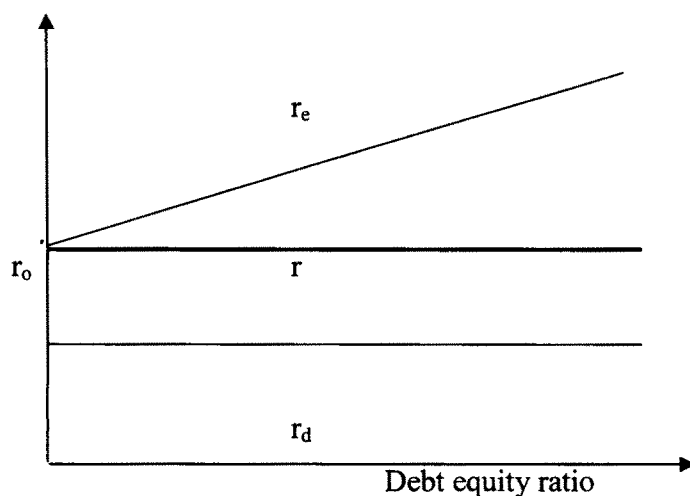
Return on asset

Figure No.2.3 :- MM Proposition II capitalization rates

Proposition III

With no taxes the cost of capital for levered firm and unlevered firm would be the same and equal to the capitalization rate of the all equity financed firm. This provides the rule for optimal investment decision. The discount rate to be used for evaluating the project will be WACC. It states, the cut off rate for investment purposes in all cases will be WACC and will be completely unaffected by the type of security issued to finance the investment (Sheeba Kapil, 2011).

4) **Modigliani and Miller theory – With taxes**

Proposition I

MM's also have considered the implication of corporate taxes on the capital structure. Earnings available to the suppliers of funds are not the same for levered and unlevered firm, as was the case with no taxes. When corporate taxes are applicable the earnings available to shareholders of levered firm are higher than unlevered firm. The extra amounts saved to be the taxes saved, as

the expense of interest is tax deductible. This is known as tax shield of debt. The cost of debt therefore, is not the interest rate charged (10%) but lesser by the amount of taxes saved thereon.

With a tax rate T (40%), the effective cost of debt reduces to (6%) or $r_d = X (1-T)$. Since the levered firm offers more cash to suppliers of capital, the value of the levered firm will be greater than that of unlevered firm.

For the purpose of valuation, the excess value will be equal to the present value of the taxes saved. In case of a perpetual debt the value of levered firm will exceed by an amount equal to the tax rate X amount of debt, being the present value of tax shield. If the tax is saved in every year ($r_d X D X T$), then the present value of amount of tax saved will be as follows

PV of tax shield = $\dfrac{\sum_{n=1}^{\infty} r_d \, x \, D \, x \, T}{r_d}$

where,

r_d = Cost of debt,

D = Debt,

T= Tax rate

The value of unlevered firm is as follows

$V_U = \dfrac{EBIT (1-T)}{r_o}$

With no debt, the net earnings available to the shareholders would be EBIT (1-T) and the value of firm would be given by earnings divided by the capitalization rate r_o.

As compared to the levered firm is financed by way of debt and equity, the impact of such debt financing on the valuation of the firm as shown below

$$V_L = \frac{EBIT\,(1\text{-}T)}{r_o} + \frac{T\,x\,D\,x\,r_d}{r_d}$$

$$= \frac{EBIT\,(1\text{-}T) + T\,x\,D}{r_o}$$

Mathematically the value of unlevered firm is stated as follows

$$V_L = V_U + T\,X\,D$$

Proposition I of MM with taxes can be restated as:-

The value of levered firm will be higher than the unlevered firm by the amount of tax shield on debt enjoyed by the levered firm.

Proposition II

MM's proposition II under taxes recognizes that with increasing debt the cost of equity would rise through a lesser rate than what it would in the absence of taxes. The cost of equity for the levered firm undergoes a change with the amount of debt. With the corporate taxes, the debt becomes more valuable due to a tax shield provided by interest paid on the debt. This tax shield benefits the equity holders and hence the cost of equity would not rise as much had there been no taxes.

Cost of equity for a levered firm, r_e is given by equation as below

$$r_e = r_o + D/E\,(1\text{-}T)\,(r_o\text{-}r_d)$$

The cost of equity in a levered firm would rise by the differential of all equity cost and (r_o) and cost of debt (r_d), but the proportion of increase would be $(1\text{-}T)$ times the debt equity ratio.

The proposition II of MM can be stated that with the increased debt the cost of equity would rise because equity holders would like to be compensated for the additional risk they assume because of the likely threat to their cash flows. The cost of equity when firm has no debt accounts for only the business risk. With the debt financing firm add risk due to capital structure, called financial risk, to the business risk.

Cost of equity = reward for business risk + reward for financial risk

Proposition III

MM's proposition under taxes recognizes with the increasing debt the cost of capital too would rise though at a lesser rate than what if would in the absence of taxes. For the market the value of levered firm is more as compared to the unlevered firm. The increased value of levered accrues to equity shareholders and the cost of equity does not rise as much as it would for unlevered firm. The weighted average cost of capital (WACC) declines for the levered firm despite increased capitalization rate of equity capital (Sheeba Kapil, 2011). WACC for levered firm is as follows
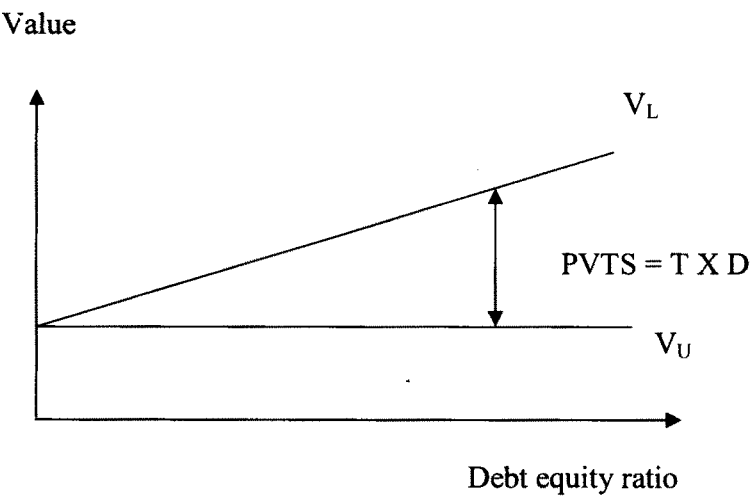
$$WACC_L = r_e \frac{E}{D+E} + \frac{r_d(1-T)}{D+E} D$$

Value

Debt equity ratio

Figure No 2.4- MM Proposition with taxes: Value of firm

Return on asset

r_e
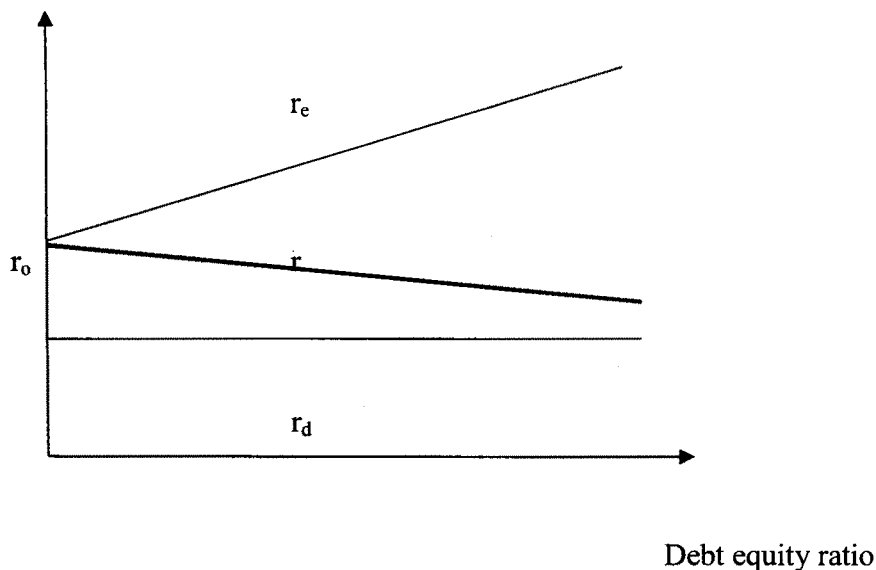
r_0 ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ r

r_d

Debt equity ratio

Figure No.2.5:- MM Proposition II with taxes: - capitalization rates

5) Free cash flow and agency problem

Jensen (1986) discussed agency problem associated with the free cash flow with the firm. He defined free cash flow as excess of that required to fund all projects that have positive net present value. Free cash flow theory is framed for matured firms and theory says that as firms generate significant cash flow exceeding profitable investment opportunities, then high debt levels in capital structure increases firm value despite the threat of financial distress. Corporate managers are the agents of shareholders but they have conflict with the payout to shareholders. Free cash has no productive use so it should distribute to shareholder, instead management uses this for other purposes. Particularly to for those firms free cash flow problem is severe which generate substantial free cash flow. The payout to the shareholders reduces the resources under manager's control with manager's power. Manager has incentive to cause their firms to grow beyond their optimal size, growing firm increases manager's power with resources under their control, manager's compensation. His consumption of more perquisites is on the cost of innocent shareholders who are interested to motivate manager to disgorge the cash rather than investing it at below the cost of capital or wasting it in organization inefficiencies. Jensen argues that debt can solve this problem. Debt creation without retention of proceeds of the issue enables manager to effectively bond their promise to pay out future cash flows. The firm can issue debt and proceeds used for repayment to shareholders, in such way that future interest and repayment of

principal of debt obligations match the accrual of free cash. In this way debt compels the management to commit free cash to service the debt. Presence of high debt may reduce the agency cost of free cash flow because interest obligations reduce the funds available under manager's control. Hence raising debt when a firm has a surplus cash flow is consistent with the free cash flow theory. Jensen argues that debt commits the firm to pay out cash, it reduces the amount of discretionary funds available to managers to waste in low NPV projects, consuming perquisites. With the presence of debt, the debt holders have the right to take the firm into bankruptcy court if they fail to maintain their promise to pay interest and principal payments (Sheeba Kapil, 2011).

6) Agency cost theory

In practice there exist conflict of interest among shareholders, debt holders and management. These conflicts give rise to agency problems, which involve agency costs. Agency costs have influence on a firm's capital structure.

Areas of conflict

i)   Shareholders – Debt holders conflict

Debt holders have a preferential, but fixed claim over the firm's assets. Shareholders on the other hand have a residual but unlimited claim on the firm's assets. They also have limited liability for the firm's obligations. In a financial crisis, shareholders can simply opt out from owning the firm. In a highly geared firm, the debt holders risk is very high since shareholders have limited liability. They are not compensated for the added risk of default which tantamount to transfer wealth from debt holders to shareholders. The conflict between shareholders and debt holders arise because of the possibility of shareholders transferring the wealth of debt holders in their favour. The debt holders may lend to invest in low risk project while the firm may invest in high risk projects. Firm may also raise substantial risky new debt and thus increase the debt holders' risk.

ii)   Shareholders – Managers conflict

Shareholders are the legal owners of a company and management is required to act in their best interest as their agents. The conflict between shareholders and managers may arise on two counts. First, managers may transfer shareholders wealth to their advantages by increasing their

compensation and perquisites. Second, managers may not act in the best interest of shareholders to protect their jobs. Managers may not undertake risk and forego profitable projects.

iii)   Monitoring and agency costs

The agency problems arising from the conficts between shareholders, debt holders and managers are handled through monitoring and restrictive covenants. External investors know that managers may not function in their interest therefore they have a tendency of discounting the prices of firm's securities.   These investor require monitoring and restrictive covenants to protect their interests. Debt holders put restrictions on the firm in terms of new debt. They also have involved experts and outsiders to evaluate the soundness of the firm and monitor the firm's subsequent actions. Similarly shareholders create many monitoring mechanisms to ensure that manager's raise and invest funds keeping in mind the principle of shareholders wealth maximization. The cost of monitoring and restrictive covenants is called agency costs.

Agency costs of equity comprise incentives to managers to motivate them to act in the best interest of shareholders by maximizing their wealth. The agency cost of equity because of the difference between the shareholders and management. As long as the management's interest diverges from those shareholders ,the shareholders will have to bear this cost. Management may be tempted to take suboptimal decisions that may not work towards maximizing the value of firm. Strategies such as i) favouring extremely risky projects even when safe projects with higher NPV are available ii) reluctance to bring in any fresh equity if situations so demand iii) draining cash and other productive resources of the firm, do have the costs that detrimental to the firm.

Agency cost of debt take account of the likely hood of the shareholders attempt to expropriate wealth. Agency cost of debt arises because of different interests of shareholders and debt holders. In general the agency cost of debt happens when management take a project giving benefit to shareholders more than bondholders. Management can in any way transfer the wealth to the shareholders and leaving debt holders empty handed. The debt holders take by assuming this take preventive action in the form of higher rate of interests.

The implications of agency costs for capital structure are that management should use debt to the extent it maximizes the shareholder's wealth. Agency costs reduce the tax advantage of debt (Sheeba Kapil, 2011).

7) The trade off theory

Financial distress arises when a firm is not able to meet its obligations (payment of interest and principal) to debt holders. The firm's continuous failure to make payments to debt holders can ultimately lead to the insolvency of the firm. For a given level of operating risk, financial distress exacerbates with higher debt. With the higher business risk and higher debt and probability of financial distress becomes much greater. The degree of business risk of a firm depends on the degree of operating leverage (i.e. proportion fixed assets), general economic conditions, demand and price variations, intensity of competition, extent of diversification and the maturity of industry. Companies operating in turbulent business environment and in highly competitive markets are exposed to higher operating risk. The operating risk is further aggravated if the companies are highly capital intensive and high proportion of fixed costs. Matured companies in relatively stable market conditions have lesser operating risk. Similarly, diversified companies with the unrelated business are in better position to face the fluctuating market conditions.

Cost of financial distress

Cost of financial distress can be divided in two categories 1) Direct cost 2) Indirect cost.

Direct cost includes such as cost of litigation and administration, loss due to distress sale, reduction in value of assets due to its non use etc.

Indirect costs relates to the actions of employees, managers, suppliers, customers and shareholders. Indirect cost includes such as management time in warding off the creditors, managing by management by crisis rather than planning, faulty decisions making in choosing right business opportunities, low employee moral etc.

1) Employees of financially distressed firm become demoralized, as they are worried about their future. Their efficiency and productivity decline. This affects the quality of products. The efficient managers and employees start leaving the company. This affects the reputation of the firm and sales its products may drop

2) Customers of the financially distressed firm may fear its liquidation and get concerned about its quality of service or product. They apprehend problems with regard to after sale services and maintenance. Consequently, the demand for the firm's products or services starts falling rapidly.

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3) Suppliers also curtail or discontinue granting credit to the firm fearing liquidation and liquidity problems of a financially distressed firm. Creditors become less tolerant when a firm faces financial problems. They force the firm into liquidation to realize their claims.

4) Investors become concerned because of inability of financially distressed firm to raise funds for profitable investment opportunities. Either investors are not ready to supply capital to the firm or they make funds available at high costs and rigid terms and conditions. Non availability of funds acceptable terms could adversely affect the operating performance of the firm.

5) Shareholders start behaving differently. When a firm is under financial distress, but not insolvent, shareholders may be tempted to undertake risky projects using whatever cash the firm is left with. If risky projects succeed, their gain can be substantial. If the project falls, creditors will suffer the loss. Shareholders have limited liabilities and they have the option of easily existing from a financially distressed firm.

6) Managers generally have a tendency to expropriate the firm's resources in the form of perquisites and avoid risk. When the firm is under financial distress, they may have higher temptation to pocket the firm's resources. Managers also start making decisions keeping in mind short term rather than the long term interests of the company. They must costs that affect quality of products and sell productive assets to improve the short term liquidity of the company. They may pass up profitable investment opportunities to avoid any sort of risk. These sub optimal will further deepen the problems of a distressed firm and ultimately cause its liquidation.

The value of levered firm is given as follows :

Value of firm = Value of unlevered firm + PV of tax shield – PV of financial distress
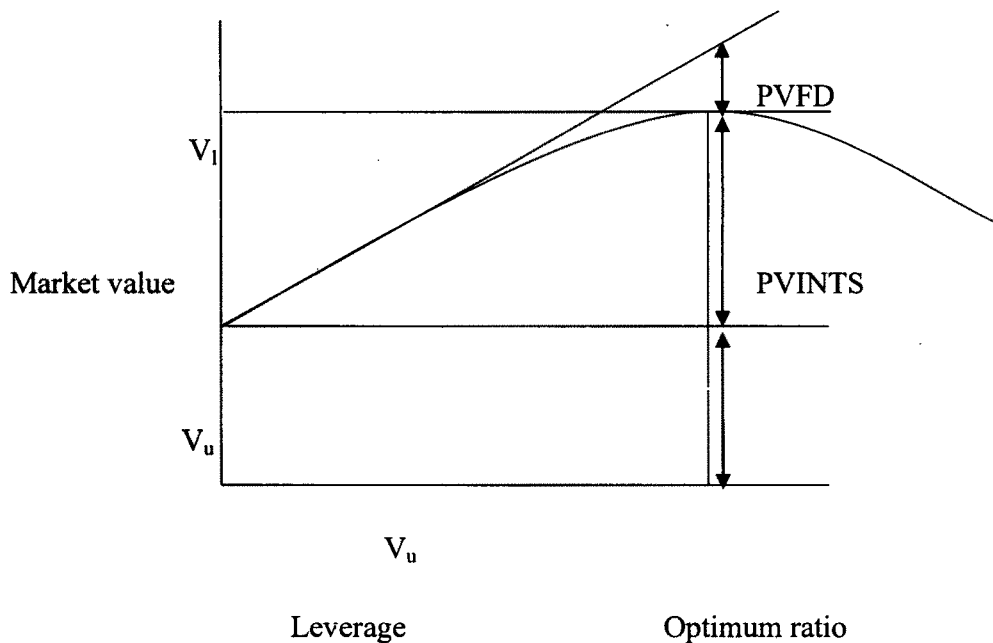
$$V_1 = V_u + PVINTS-PVFD$$

Figure no .2.6 – Static trade off model

Figure no 2.6 shows that how the capital structure of the firm is determined as a result of the tax benefits and costs of financial distress. The present value of the interest tax shield increases with the borrowing but so does the present value of the costs of financial distress. However, the costs of financial distress are quite insignificant with moderate level of debt and therefore the value of firm increases with debt. With more and more debt, the costs of financial distress increases and therefore the tax benefit shrinks. The optimum point is reached when the marginal present values of the tax benefit and the financial distress costs are equal. The value of the firm is maximum at this point(Sheeba Kapil, 2011).

8) Pecking order theory

Pecking order theory is based on the asymmetric information between insiders and outsiders of the firm about the firm's current operations and investment opportunities. Hence raising funds externally is relatively costly than internally generated funds. Myers and Majluf (1984) explained that manager pursue the objective of maximizing true value of firm's existing shares. Hence manager worries about the value of the old shareholders stake in the firm. Myers and Majluf (1984) argue that asymmetric information will lead to a mis-pricing to firm's equity share at market, generate loss to existing shareholders wealth. If the firm finances its investment opportunity by issuing new shares, then these shares will be underpriced. The reason for under

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pricing of securities is manager can not convey the value of their existing asset and available investment opportunities and outside investors can only guess this value. Hence external investors can not discriminate between good and bad projects. Investors interpret the firm's decision to issue new securities as a bad news and price new securities accordingly. Investors demand premium to investment or firm issue equity at discount. Myers (1984) explained the cost of external financing as administrative and underwriting cost and in some cases possibility of under pricing of new securities. This makes external equity relatively expensively as compare to other source of finance. Information asymmetry creates different type of cost, the possibility that the firm will choose not to issue and pass up positive NPV project. Myers (1984) explained the advantage of debt over equity issue and general rule "issue safe securities before risky ones". If the firm seeks to raise the fund, then it is better to issue debt than equity. Myers (1984) argues that firm prefers first for internal finance and second preference for debt and equity as last resort. This gives the indication that debt ratio of a firm is a outcome of cumulative financing decision and the financial deficit of the firm. So debt ratio of the firm is accidental result of internal cash flows and investment needs. The value of debt is not sensitive to the private information held by insiders. If a risk free debt is available, then theory indicates firm will not issue equity. Pecking order theory does not explain any target debt .

In conclusion Myers (1984) argues that, firms avoid to issue equity and other risky securities because they do not want to run the risk of falling into the dilemma of passing by positive net present value projects or issuing a underpriced stock . They set target dividend payment ratios so that normal rates of equity investment fulfilled by internally generated funds. The part of investment outlay is covered by new borrowing, at the same time they restrain themselves to keep the debt safe (i.e. risk free). This has following two reasons – 1) To avoid cost of financial distress 2) To maintain financial slack in the form of reserve borrowing power. Reserve borrowing power means firm's ability to issue safe debt. Pecking order theory recognizes both asymmetric information and cost of financial distress. Thus the firm faces two increasing costs with the pecking order – it faces higher cost of financial distress and passing up positive NPV projects because the firm is unwilling to finance them by issuing common stock or other risky securities. The firm may reduce these costs by issuing equity even it is not required to finance real investment and move the firm down the pecking order. Accordingly pecking order theory, observed leverage is result of past profitability and investment opportunities. Firms with higher profitability may borrow less because of sufficient availability of internal generated funds. According to pecking order theory, a large size companies gives rise to greater information

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asymmetry existing between internal and external finances and have less debt. In case of growing companies, the growth in revenue indicates less need to borrow.

This theory has following characteristics:-

1) Firms prefer internal finance.
2) They adapt their target dividend payout ratios to their investment opportunities, although dividends are sticky and target payout ratio only gradually adjusted to shifts in the extent of valuable investment opportunities.
3) Sticky dividend policies, plus unpredictable fluctuations in profitability and investment opportunities indicate that internal finance may more or less than investment outlays. If it less firm may use its cash balance.
4) In case of external finance, firm issue the safest security first. Firm start with the debt, then hybrid securities such as convertible bonds, then equity as last resort.

The pecking order theory does not insist on optimum capital structure but it helps to explain patterns regarding financing preferences (Myers, 1983).

9) Market timing theory

Market timing theory insist on relationship between market valuations of stock and capital structure of the firm. Firms inclined to issue equity shares instead of debt when market value of share is high, compare to book value. Also firm repurchase or buy back shares when market value is low. So fluctuations in stock prices affect corporate financing decisions and capital structure is the outcome of attempts to time the stock market. The theory assumes that economic agent are rational, companies issue equity directly after a positive information release and that helps to reduce the information asymmetry between the firm's management and shareholders. Thus the reduction in information asymmetry result in increased in stock prices and in response to it , firms follows their own timing to issue equity and buy back shares.

Conclusion

Review of capital structure theories includes nine capital structure theories and capital structure theories are considered from various dimension. David Durand proposed two capital structure theories net income and net operating income approach. Net income approach theory proves presence of optimum capital structure and net operating income approach reject optimum capital structure, so NOI approach consider each capital structure is as good as another. But the

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limitation of Durand's theory is based in its assumption, that there is no taxation and which is very rare case. Net Income approach though easy to understand, it ignores the most important aspect of leverage that the market price depends upon risk which varies in direct relation to the changing proportion of debt in the capital structure .M&M theory of capital structure provides behavioral explanation to that capital structure is immaterial to the value of the firm and it seems to be good enough in the light of assumption underlying the model. However the most of the assumptions are unrealistic and untenable. Moreover, the arbitrage process which provides behavioral justification for the model, is itself questionable in real life as the perfect competition is never found and the transactions costs are inevitable. The arbitrage mechanism assumes that individual investor and corporate borrow funds at the same rate which is not valid. Also all investors have complete information is also illusory and this assumption is compulsory, without this assumption arbitrage process will not operate.

Jensen (1986) discussed free cash flow problem associated with debt, he argues that firm which generates significant free cash flow having high debt increases value of firm despite the threat of financial distress. Free cash flow theory is only applicable to matured firms which generate significant free cash. This theory is not applicable to matured firm which fail to generate free cash and this theory strongly assumes that management pursue personal interest at the cost of innocent shareholders. Free cash flow theory ignores presence of cost of financial distress with increasing debt and insists on debt in capital structure on anticipation of future free cash.

Agency cost theory discusses conflict between shareholders, debt holders and management and the implications of agency cost for capital structure are that management should use debt to the extent it maximizes the shareholder's wealth. Trade off theory proposes that with growing debt present value of interest tax shield increases with moderate amount of cost of financial distress and value of firm also increases, but with more and more debt cost of financial distress increases, tax benefit decreases and value of firm also decreases. Trade off theory discusses capital structure theory on concept of cost of financial distress. Financial distress arises when a firm is not able to meet its obligations (payment of interest and principal) to debt holders. The firm's continuous failure to make payments to debt holders can ultimately lead to the insolvency of the firm. For a given level of operating risk, financial distress exacerbates with higher debt. Cost of financial distress can be divided in two categories 1) Direct cost 2) Indirect cost. Trade off theory insists that firm follows target debt equity ratio and over the period try to maintain it. But trade off theory cut the cord of agency relationship of firm with capital structure and provides

more emphasis on debt target ratio. The limitation of this theory is that it insists on firm follows target debt ratio and which is not visible. So here question comes how to find out target debt equity ratio and in real life firm follows same target debt ratio. Also as per static trade off theory firm can bounce back to target debt ratio, if and only if adjustment cost is small. If adjustment cost is large firm will definitely deviate from its targeted debt ratio.

Pecking order theory is based on the asymmetric information between insiders and outsiders of the firm about the firm's current operations and investment opportunities. Hence raising funds externally is relatively costly than internally generated funds. Myers (1984) proposes that there is a hierarchy in financing, firms uses internal earnings first, and then debt and equity is used as last resort. The limitation of this theory is that, theory insists on manager of firm follows existing shareholders interest and retain the earnings, use the same for further investment. This theory ignores agency relationship of firm with capital structure and assumes that manager does not follow personal interest at the cost of shareholders interest.

So capital structure is studied in detail by different aspects by various researchers but under particular set of assumptions. If this set of assumptions ignores these theories are not valid in real life.

Section II

This section of chapter II discuss on earlier study on determinants of capital structure and their findings and conclusion. The study starts with Rajan and Zingles (1995) work on capital structure, this research work explained the various ways to understand financial leverage of the firm against the classical measure of financial leverage as debt to equity. Then review of research findings is included of capital structure studies in Indian automobile companies like, Dr. A. Vijaykumar (2011), examined the presence of pecking order theory in Indian automobile companies. Inderjit singh (2011) and Riyaz Ahemad K. ,(2012) examined the determinants of capital structure in Indian automobile industry. Raju Majumdar (2012) , has studied determinants of borrowing in Indian manufacturing companies based on secured borrowing and unsecured borrowing. Anirban Ghatak (2011), conducted a study with the objective to find out major determinants of capital structure in Indian SME's. Raju Majumdar (2012), studied the determinants of capital structure in 864 unlisted Indian manufacturing companies. Ranjitha Ajay et.al. (2012), have examined diversification strategy and capital structure decisions in Indian corporate sector. Prashant Gupta et.al. (2011), has studied relationship between capital structure and firm performance

Rajan et.al. (1995) investigated capital structure choice in major industrialized countries (G-7 countries). Such investigations of capital structure determinants in different countries provide evidence of universal acceptance on capital structure partially developed in US. G-7 countries include US, Japan, Germany, France, Italy, UK and Canada. The sample of 4,557 non financial companies of G-7 countries collected for the period of 1987 -1991. Sample includes 2,583 US companies, 514 Japanese companies , 191 German companies, 225 French companies, 118 Italian companies, 608 UK companies, 318 Canadian companies. Final sample covers 30% to 70% companies listed in each country which represents 50% of market capitalization. This research also proposed other measures of financial leverage as given below:-

1) Non equity liability to total asset
2) Total Debt to total asset
3) Total Debt to net asset .
4) Debt to capital
5) Interest coverage ratio
   a. EBIT to interest
   b. EBIDTA to interest

At an aggregate level the debt level has found almost similar in G-7 countries which is in America, Japan, Germany, France, Italy, Great Britain and Canada are 58%,69%, 73%,71%,70%,54%,60% and all debt level are more than 50% . The primary objective of this paper is establish whether the capital structure in other counties is related to the those established their significance in USA capital structure studies and the study found that determinants of capital structure indentified in earlier studies in USA and G-7 countries are related well. The result shows that firm performance and debt level have negative relationship and this relationship is more obvious as firm size gets bigger. The relationship between firm size and leverage is found positive and it implies that with growing size of firm level of leverage also increases.

Dr. A. Vijaykumar (2011) examined pecking order and trade off theory of capital structure in Indian automobile industry, commercial vehicle segment, passenger vehicle segment and two and three wheelers segment. This study includes 20 companies in Indian automobile sector and study has covered period of 13 years from 1996-2009. The measure of capital structure used in the study is book value of total debt to equity. Trade off theory insist that profitable firm employ more debt than equity to exploit debt tax shield and pecking order hypothesis insist profitable firm employ less debt due to information asymmetry problem. The study has examined determinants of capital structure in 20 Indian automobile companies, the result of the study has accepted the pecking order hypothesis. This finding proves that, Indian automobile companies follow a particular pattern in their financing. This start with internally generated funds, if additional funds required firms issue debt and later equity. Hence it is concluded that, presence of pecking order theory is accepted against to static trade off theory in Indian automobile companies.

Inderjit singh et.al. (2012) studied the determinants of capital structure in the Indian automobile industry. This study includes sample of 100 companies listed on Bombay stock exchange and period for the study 2006-2010 was selected. The determinants of capital structure are considered as growth in asset, size of firm, tangibility and profitability. The measure for capital structure is used as total debt to total asset. And study found 42% average leverage in Indian automobile sector. The study also found that firm growth, size of firm, tangibility has significant and positive relationship with the leverage. This implies that with growth in asset, growth in size of firm and tangibility is supported by debt than equity. Profitability has negative and significant regression coefficient, it implies that automobile companies follows hierarchy in

their financing. So in Indian automobile ·industry growth opportunities, firm size, asset tangibility, profitability of the firm have significant role in capital structure decisions.

Riyaz Ahemad K. (2012) examined the determinants of capital structure in companies listed in Automobile Index in NSE. Size, business risk, earning rate, dividend payout, debt service capacity, degree of operating leverage are considered as determinants of capital structure of Indian automobile companies listed in Automobile Index in NSE. Sample for the study includes 15 companies listed in Auto Index of NSE and period of the study is one year 2009-10. Capital structure is measured as total debt to total assets. Out of six variables of multiple regression model dividend payouts, debt service capacity, degree of operating leverage and business risk have found as statistically significant determinants of capital structure. Profitability and size is found negatively related with leverage but this relationship is found statistically insignificant. This study is limited to 15 companies and study of period is very less that only for one year.

Raju Majumdar (2012), has studied determinants of borrowing in Indian manufacturing companies based on secured borrowing and unsecured borrowing. For the study the companies are selected from Bombay stock exchange and sample size include 619 companies from 17 manufacturing sector. The period for the study was 2003-04 to 2008-09. Unsecured borrowing explained as fixed deposits, unsecured bank borrowings, unsecured debentures, deferred credit, inter corporate loans, unsecured foreign currency borrowings, loans from directors, commercial papers. Secured borrowings explained as the sum of secured bank borrowings, secured financial institutions borrowings, secured borrowings from government, secured borrowings from syndicate banks, hire purchase loan, loans from director, inter corporate loans. Loans from director, inter corporate loans are secured or unsecured and hence eligible for both categories. The result of this study confirm the positive relationship between tangibility and secured debt, it implies that secured borrowing increases with collateralizable capacity of the firm. The inverse relationship between unsecured borrowing and tangibility implies that secured borrowing appears before unsecured borrowing. The positive relationship between secured borrowing and firm growth indicates that firm use secured borrowing to finance growth opportunities and financial market   view collateral as a credible signal of project quality. The profitability of firm does not have any influence on secured and unsecured borrowings. The limitation of this study is that sample completely ignores unlisted firms and biased towards listed firms.

Anirban Ghatak (2011) conducted a study with the objective to find out major determinants of capital structure in Indian SME's. For the study manufacturing SME's included for a period of 5

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years (2006-2010) with sample of 1,634 manufacturing companies. The study has used debt to equity ratio proxy for capital structure with ten determinants of capital structure. This study proves the presence of trade off theory in Indian SME's. Profitability is found negative and significant determinant of leverage, so SME's in India uses more debt as profitability decreases. Also collateral or tangibility has found positive relationship with leverage, it implies that firms that have greater fixed assets can use it for mortgage. Secured debt is less expensive as compare to equity or unsecured debt , when the manager have better information than external shareholders. Small firms are more prone to higher bankruptcy as compare to large size firms. Small size firm have less debt because of higher variability in earnings and more likely probability to financial distress, the findings of the study support the same. Young firms have to depend more on debt instruments as they have limited internal generated funds. Age is found negatively related with leverage, it implies that Indian SMEs reduces debt equity ratio with growing age and rely more on equity. This research also proposes suggestion for policy makers to improve financial information environment and establish policies that allows SME's to avail equity capital. Since increased equity base will help in further borrowings, reduces sensitivity to economic conditions, provides access to private and institutional venture capitalist.

Raju Majumdar (2012) studied the determinants of capital structure in 864 unlisted Indian manufacturing companies during 2006 to 2010 and compared the results with listed companies in BSE small cap index. The measure of capital structure is used as total borrowing to total asset, long term borrowing to total asset and short term borrowing to total asset. For this study 4 independent variables are considered i.e. tangibility, growth in asset, size of the firm, profitability. The result of the study shows that, total indebtedness in listed small cap firms is higher than unlisted firms and the same has found in long term debt ratio. On the other hand, unlisted firms have higher short term borrowings compare to BSE small cap index firms. Borrowing from the banks particularly secured loan constitute major share in unlisted firms. Borrowing from bank and financial institution, foreign currency borrowings, loans from promoters, directors, shareholders and inter corporate loans constitute 91% of total borrowings. The regression model shows that, total borrowings are positively related to the asset tangibility and growth of firm, inversely related to the profitability. It implies that collateralized borrowings enable the firms to overcome the information opacity, tangibility increases   debt capacity of unlisted firms and reduces agency cost. A long term borrowing is positively related to the asset tangibility and growth of firm, inversely related to the firm size. Short term borrowing is inversely related to the tangibility and profitability of the firm, positively related to the firm size.

The pecking order hypothesis of financing hierarchy does not seem valid in case of Indian unlisted firms.

This study shows that, unlisted firms depend predominantly on bank finance as they are unable to tap financial resources from capital market and they are heavily relied on secured borrowings. It indicates that collateral borrowings help unlisted firms to overcome the information asymmetry problem. The availability of financial resources to unlisted manufacturing firms largely depends on overall capacity of the firm. Also there are different or other financial institutions for the development of different sectors of the industry, these findings fail to relate any significant role of these institutions for the development of unlisted firms.

Ranjitha Ajay et.al. (2012) have examined diversification strategy and capital structure decisions in Indian corporate sector. The panel data set for study consists of 3103 manufacturing companies that include domestic 2524 companies and multinational 579 companies. The period of study includes 7 years during 2004-2010. Diversification is the number of industries firm participates in and hence it indicates that a company is moving in number of sectors, in which it was not earlier engaged in. Diversification helps the firm to improve debt capacity and reduces chances of firm failure. Firms adopt international diversification strategy to reduce operating risk and to exploit opportunities in foreign market. In product diversification strategy firm used mainly two strategies – unrelated diversification and related diversification. Leverage is measured as total borrowing to total asset, international market diversification is measured as investment outside India as % to total asset, herfindhal index is used as proxy for product diversification which is measured as sum of squares of each industry's sales as proportion of total group sales. Study concluded that multinational companies and domestic companies are different significantly with respect to leverage, tangibility, non debt tax shield, age , size and agency cost. Only in case of multinational companies tangibility, profitability, non debt tax shield has significant impact on leverage and in case of domestic companies profitability, non debt tax shield, age, size has significant impact on leverage. Also international diversification has positive relationship with leverage in both multinational and domestic companies. But product diversification does not show any significant relationship with financial leverage. So there is no support to accept that product diversification strategy has relationship with financial leverage. This study examined diversification strategies (international market and product market) adopted by Indian manufacturing firms and assessed its influence on leverage decisions of the firm. This study reveals that domestic firms have higher debt component as compare to multinational firms.

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Geographic diversification shows positive and significant relationship with financial leverage in multinational and domestic firms but product diversification does not show any significant relationship with financial leverage.

Prashant Gupta et.al. (2011), has studied relationship between capital structure and firm performance in Indian companies during 2006-2010. He applied the data of 100 non financial companies listed on NSE. Various measures of firm performance is used as return on investment, return on equity, return on stock, earning before tax to sale, operating profit to sale and measure for debt is used as market value of debt, book value of debt and adjusted market value of debt. The capital structure measures book value of leverage and market value of leverage found in debate, some researcher use market value while other book value of leverage. The researcher follows book value measure of financial leverage and provides two arguments. The main cost of debt is cost of financial distress in the event of bankrupt. Financial distress cost affect to WACC and optimum capital structure. After debt issuance, a change in market value of debt does not affect interest tax savings. In case of bankruptcy, liability towards debt holders is not market value of debt but book value of debt. And book values for the researcher are easily accessible, genuine record and not subjected to market fluctuation. Also it is possible that book value of equity is negative due to previous losses but it enjoys positive market value on the expectation of future cash flows of the firm. The study considered total liabilities as measure of leverage and he argues that when creditor will lend the firm creditor not only consider long term debt of the company but total liability outstanding.

The result of study indicates that market value measures have strong relationship with firm performance compare to book value. This analysis insists on that, market value must be considered in evaluating relationship between capital structure and firm performance. He found that adjusted market value , market value, book value of capital structure have strong correlation with financial performance measures except the relationship between return on stock and adjusted market value is not meaningful. The negative relationship between adjusted market value, market value and firm performance measure is observed. It implies that presence of pecking order theory – that firm follows hierarchy in capital structure decisions and profit of the firm reduces dependency on leverage increases.

Conclusion

Rajan et.al. (1995) investigated capital structure theories developed in US with other developed countries and found that capital structure determinants are similar in other countries too. A. Vijaykumar (2011) examined presence of trade off theory or pecking order hypothesis and concluded the presence of pecking order theory in Indian automobiles companies. Inderjit singh et.al. (2012) also found the presence of pecking order hypothesis in Indian automobile industry. Raju Majumdar (2012) examined the determinants of secured and unsecured borrowings in Indian listed firms, the study found that secured borrowings come first before unsecured borrowings and profitability fail to show any relationship with borrowings. Secured borrowing and firm growth have positive relationship which implies that firm use secured borrowing to finance growth opportunities and financial market view collateral as a credible signal of project quality. Anirban Ghatak (2011) conducted a study with the objective to find out major determinants of capital structure in Indian SME's. This study proves the presence of trade off theory in Indian SME's. Raju Majumdar (2012) studied the determinants of capital structure in 864 unlisted Indian manufacturing companies during 2006 to 2010 and compared the results with listed companies in BSE small cap index. The result of the study shows that, total indebtedness in listed small cap firms is higher than unlisted firms and the same has found in long term debt ratio. On the other hand, unlisted firms have higher short term borrowings compare to BSE small cap index firms. This study shows that, unlisted firms depend predominantly on bank finance as they are unable to tap financial resources from capital market and they are heavily relied on secured borrowings. It indicates that collateral borrowings help unlisted firms to overcome the information asymmetry problem. Ranjitha Ajay et.al. (2012) have examined diversification strategy and capital structure decisions in Indian corporate sector. This study reveals that domestic firms have higher debt component as compare to multinational firms. Geographic diversification shows positive and significant relationship with financial leverage in multinational and domestic firms but product diversification does not show any significant relationship with financial leverage. Prashant Gupta et.al. (2011), has studied relationship between capital structure and firm performance in Indian companies. The result of study indicates that market value measures have strong relationship with firm performance compare to book value. The negative relationship between adjusted market value, market value and firm performance is observed and it implies that presence of pecking order theory in Indian companies.

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