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Conceptual Framework of Capital Structure
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Conceptual Framework of Capital Structure

2.1 Introduction

The term ‘capital’ may be defined as the long term funds of the firm. Capital is the aggregation of the items appearing on the left hand side of the balance sheet minus current liabilities. It is broadly categorized into ‘equity’ and ‘debt’.

Equity consists of: Equity share capital, Preference share capital, Share premium, free reserves, Surplus profits, Discretionary provisions for contingency, development rebate reserve Debt consists of: All borrowings from government, Semi government, statutory financial corporations and other agencies, term loans from banks and financial institutions etc, Debentures, All deferred liabilities.

The term ‘structure’ may be defined as the way in which the parts of anything are organized or arranged together. It is a systematic arrangement of parts in a particular way or pattern.

The firm’s mix of debt and equity financing is called the capital structure. It does not mean ‘debt versus equity’.  

Generally, a firm mobilizes fund which depending upon their maturity period can be classified as long term and short term sources. The long term source consists of capital reserves and term loans raised from public and financial institutions, while the short term is made up of current liabilities and provisions. Financing decisions involve raising funds for the firms. It is concerned with formulation and designing of capital structure or leverage. While investment
decisions are related to the asset side of the balance sheet, financing decisions are related to the liabilities and equity side. Capital structure ordinarily implies the proportion of debt and equity in the total capital of a company.

A firm’s main resource is the stream of cash flows produced by its assets. When the firm is financed entirely by common stock, all those cash flows belong to the shareholders. When it issues both debt and equity securities, it splits cash flows into two streams, a relatively safe stream that goes to the debt holders and a riskier stream that goes to the stockholders.¹

Any change in the structure claims to the company’s assets would be a financing decision and would represent a change in capital structure. The theoretical interest in capital structure was motivated by its relationship to the cost of capital and hence value of the company. The cost of capital is merely an artifice to be used by the company in arriving at a capital structure and a set of capital investment decisions which would maximize the market price of its outstanding share capital.

There is no such thing as the model capital structure for all business undertakings. One way of planning the capital structure is to make it fit into a model compiled from number of different experiences that may have been drawn from the historical ratios of that firm. This exercise may be checked with the experience of competitive concerns, of the industry as a whole and of security analysts, underwriters, investment companies, and finance and development corporations. Further, this exercise has to be made within the constraints imposed by the government authorities who have their own ideas about how debt and equity should be blended in capital structure.
Though there is no such thing as model capital structure for all business enterprises, there are common characteristics that seem to typify certain industries. For example, public utilities are typically heavily leveraged with debt and/or preference share as compared to manufacturing and merchandising concerns. The former are distinguished for their relatively stable income, costs and profits compared with the latter.2

A decision of the proper balance of security issues—equity shares, preference share and long term loans—can be made only within the context of the individual company at a specific stage in its history. It is possible by having a reasonable knowledge of its special circumstances of the altitude and objectives of its owners and management and of the actual and anticipated condition of the capital market and of the economic, monetary and fiscal policies of the government.

The extent to which the choice of security types takes the time and attention of the corporate financial executive and the board of directors varied from one company to another and within a single company from time to time. The decision change or/no change in capital structure generally depends on the rate of growth of the firm, the internal generation of funds and the total requirements of funds for financing the growth.3

2.2 Assumptions

What should be the proportion of equity and debt in the capital structure of a firm? How much financial leverage should a firm employ? This is a challenging task and an attempt to answer of questions like this; one should have an
understanding of the relationship between financial leverage and cost of capital or the other way, financial leverage and firm valuation.³

To examine the relationship between above two, the following assumptions are to be made:

1. There is no income tax, corporate or personal.

2. The firm pursues a policy of paying all of its earnings as dividend to stock holders’ i.e. 100% payout ratio is assumed.

3. Investors have identical subjective probability distributions of net operating income for each company.

4. The net operating income is not expected to grow or decline over time.

5. A firm can change its capital structure almost instantaneously without incurring transaction costs.

The rationale for the above assumptions is to abstract away the influence of taxation dividend growth and market policy varying perceptions about risk imperfections so threat the influence of financial leverage on cost of capital can be studied with greater clarity.
2.3 Capital Structure Theories:

1. Net income (NI) approach.

2. Net operating income (NOI) approach.

3. Traditional approach

4. MM hypothesis with and without corporate tax.

2.3.1. Net Income (NI) Approach:

This is the simplest approach. As suggested by Durand, this theory states that there is a relationship between capital structure and the value of the firm and therefore, the firm can affect its value by increasing or decreasing the debt proportion in the overall financing mix. NI approach makes the following assumption:

1. That the total capital requirements of the firm are given and remain constant.

2. That cost of debt is less than cost of equity.

3. Both cost of debt and cost of equity remain constant and increase in financial leverage i.e. use of more and more debt financing in the capital structure does not affect the risk perception of the investors.

The NI approach starts from the argument that change in financing mix of a firm will lead to change in WACC of the firm resulting in the change in the value of the firm. As cost of debt is less than cost of
equity, the increasing use of cheaper debt in the overall capital structure will result in the magnified returns available to the shareholders. The increased returns to the shareholders will increase the total value of the equity and thus increase the total value of the firm. On the other hand, if the financial leverage is reduced by the decrease in the debt financing the WACC, of the firm will increase and the total value of the firm will decrease. The NI approach to the relationship between leverage costs of capital has been presented graphically in the following figure.\(^5\)

According to NI approach both the cost of debt and the cost of equity are independent of the capital structure; they remain constant regardless of how much debt the firm uses. As a result, the overall cost of capital declines and the firm value increases with debt. This approach has no basis in reality; the optimum capital structure would be 100 per cent debt financing under NI approach. It ignores the most important aspects of leverage that the market price depends upon the risk which varies in direct relation to the changing proportion of debt in the capital structure.

### 2.3.2. Net Operating Income Approach

The Net Operating Income approach (NOI) is opposite to the NI approach. This is also known as Independence Hypothesis. According to the NOI approach, the market value of the firm depends upon the net operating profit or EBIT and the overall cost of capital, WACC. The financing mix or the capital structure is irrelevant and does not
affect the value of the firm. The NOI approach makes the following assumption:

1. The investors see the firm as a whole and thus capitalize the total earnings of the firm to find the value of the firm as a whole.

2. The overall cost of capital of the firm is constant and depends upon the business risk which also is assumed to be unchanged.

3. The cost of debt is also taken as constant.

4. The use of more and more debt in the capital structure increases the risk of the shareholders and thus results in the increase in the cost of equity capital. The increase in cost of equity is such as to completely offset the benefits of employing cheaper debt and

5. That there is no tax.

The NOI approach is based on the argument that the market values the firm as a whole for a given risk complexion. Thus, for a given value of EBIT, the value of the firm remains same irrespective of the capital composition and instead depends on the overall cost of capital.

The financing mix is irrelevant and does not affect the value of the firm. The value remains same for all types of debt equity mix. Since there will be change in risk of the shareholder as a result of
change in debt equity mix, therefore the cost of equity will be changing linearly with change in debt proportion.

The NOI approach considers WACC to be constant and therefore, there is no optimal capital structure; rather every capital structure is as good as any other and every capital structure is optimal. According to NOI approach the value of the firm and the weighted average cost of capital are independent of the firm’s capital structure. In the absence of taxes, an individual holding all the debt and equity securities will receive the same cash flows regardless of the capital structure and therefore, value of the company is the same.

2.3.3 The Traditional Approach

The NI and the NOI approach hold extreme views on the relationship between the leverage, cost of capital and the value of the firm. In practical situation, both these approaches seem to be unrealistic. The traditional approach takes a mid way between the NI and the NOI approach. As per this approach, a firm should make a judicious use of both –debt and equity to have an optimal capital structure. At this capital structure, WACC, of the firm will be minimum and the value of the firm maximum. It states that the value of the firm increases with increase in financial leverage but up to a certain limit only. Beyond this limit, the increase in financial leverage will increase its WACC also, and the value of the firm will decline. Under this approach, the cost of debt is assumed to be less than the cost of equity. This approach, on the relationship between capital structure and the firm value, has three stages like the stage of increasing value, optimum value and declining
value. The traditional approach argues that moderate degree of debt can lower the firm’s overall cost of capital and thereby, increase the firm value. The initial increase in the cost of equity is more than offset by the lower cost of debt. But as debt increases, shareholders perceive higher risk and the cost of equity rise until a point is reached at which the advantage of lower cost of debt is more than offset by more expensive equity.

2.3.4 Modigliani-Miller Theory

Modigliani and Millar presented this theory in the year 1958 about the relationship between cost of capital and value of the firm. As per the theory, under set of a given assumptions, capital structure and its composition has no effect on the value of the firm. This model shows that the financial leverage, cost of capital and value of the firm are independent of capital structure. This is an extension to NOI approach with the mixture of investors’ behavior. It is based on the following assumptions:

1. The capital markets are perfect and complete information is available to investors.

2. There is no transaction cost.

3. The securities are divisible

4. Investors are rational and well informed about the risk and return of all the securities.
5. All the investors have same probability distribution about the expected future earnings.

6. There is no corporate tax (assumption removed later on).

7. The personal leverage and the corporate leverage are perfectly substitutable.

MM model can be discussed in terms of two propositions- I and II.

2.3.4.1 MM’s Proposition I:

This proposition argues that two firms of same nature but different in respect of financing pattern and market value, then the investor will develop a tendency to sell the shares of the overvalued firm and to buy the shares of the undervalued firm. Thus buying and selling pressures will continue till the two firms have same market values. The investors will follow arbitrage process which is justified by the behavior. It states that the firm’s value is independent of its capital structure. With personal leverage, shareholders can receive exactly the same return, with the same risk, from a levered firm and an unlevered firm. Thus, they will sell shares of the over-priced firm and buy shares of the under-priced firm until the two values equate. This is called arbitrage.
2.3.4.2 MM’s Proposition II:

This proposition states that capital structure depends upon three factors i.e. overall cost of capital, cost of debt and the firm’s debt equity ratio. Under this model, there is a linear relationship between the cost of capital and leverage. Here, the benefits of increasing leverage are completely offset by the value of the firm same.

The cost of equity for a levered firm equals the constant overall cost of capital plus a risk premium that equals the spread between the overall cost of capital and the cost of debt multiplied by the firm’s debt-equity ratio. For financial leverage to be irrelevant, the overall cost of capital must remain constant, regardless of the amount of debt employed. This implies that the cost of equity must rise as financial risk increases. Financial distress arises when a firm is not able to meet its obligations to debt-holders.

Theoretically the MM model, that there is no relationship between the leverage and the value of the firm, seems to be good enough in the light of the assumptions underlying the model.

2.3.4.3 This model has several limitations; 6

1. Non substitutability of personal and corporate leverage: under this model, the arbitrage mechanism operates
on the assumption that the personal leverage of the investor and the corporate leverage are perfect substitute. Different borrowers have different choice of investments and individual investors do not have the privilege of low different in all the states of India.

2. Transaction cost: The assumption of no transaction cost is imaginary. The buying and selling of securities involve some cost.

3. Institutional investors: if an institution or a firm is a shareholder in a levered firm which is valued higher in the market, can this institutional investor take benefit by the arbitrage mechanism? Generally, it cannot be taken.

4. Availability of all information: in real life, the assumption that all the investors have complete information is also illusory. However, this assumption is compulsory otherwise the very emergence of the arbitrage process will become impossible.

5. Corporate taxes: the MM model is based on the assumption that there is no corporate tax. This assumption was removed later. This assumption is also unrealistic and the tax aspects of the levered firm is very important in practice.

### 2.4 Factors Determining Capital Structure

The important factors and considerations in planning the capital structure are:

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1. **Income:**

This factor mainly deals with the change in income of the firm from stock holders’ point of view. This factor decides earning per share. And the impact of financial leverage on return on equity. If firm’s earnings before interest and taxes are low, from earnings per share point of view, equity financing is favourable and vice versa. When the return on investments that is earnings before interest and taxes divided by total assets is less than the average cost of debt, financial leverage depresses return on equity and vice versa.

2. **Risk:**

This factor is divided in two parts: Business risk and financial risk. When a slight change in sales of the firm has major impact on EBIT, firm has to come across the business risk. It occurs because of high amount of fixed operating cost. This change depends on the variability in the firm’s operations. It may be caused by the macroeconomic factors and industry and firm specific factors. The firm’s capital structure directly affects its financial risk, which means may be described as the risk resulting from the use of financial leverage. Financial leverage is concerned with the relationship between EBIT and EPS. The more fixed cost financing the firm has in capital structure, the greater its financial risk. A capital structure is only efficient when it minimizes total risk of the firm.

3. **Control:**

The final decision making power of the company is in the hands of the equity shareholders, therefore, the issue of securities should be such
that the company should not lose the control over the operations of the business. A management concerned about control may prefer to issue debt rather than equity shares to raise funds. A capital structure of a firm should be one which reflects the management’s philosophy over the firm. Debt investors have no direct say in the management’s decision. The company should also keep in mind about the future control while issuing convertible debentures or preference shares.

4. **Flexibility:**

The capital structure can be determined within the debt paying capacity of the company. The debt paying capacity generally depends upon the future cash flows to be generated by the company. The company should have that capacity to pay interest as well as principal amount to the creditors or money lenders as when needs arise to repay. And after the payment it should have sufficient cash to survive for the future. So the capital structure should be flexible enough to adapt the change occur due to repayment. It should also be possible for the company to provide funds whenever needed to finance its profitable activities.

5. **Timing:**

The capital structure should be feasible enough to implement the decisions about the raising the sources of finance. It should be implemented keeping in mind the current and future conditions of the capital market. So here sequencing of financing is important which would influence the future options of raising capital.
6. **Regulatory Norms:**

The regulatory norms prescribed by the government and various statures are required to be taken into consideration before the capital structure is planned. The company has to decide the capital structure keeping in mind all statutory norms of the government.

2.5 **Some Considerations for Determining Capital Structure:**

1. **Pecking Order Theory:**

The pecking order theory starts with asymmetric information – a fancy term indicating that managers know more about their companies prospectus risks and values than do outside investors.

Pecking order is the order of importance in relation to one another among the members of a group. This theory was proposed by Donaldson in 1961. He states that the firm does not have any target capital structure. Further that no capital structure can be termed as optimal capital structure. As per the pecking order theory, the internally generated funds have the lowest cost while the new equity capital has the highest cost. Firms obtain as much as possible from the internally generated funds. i.e. retained earnings as it is the easiest and least expensive source of the finance. In case, if the retained earnings are not sufficient enough to provide funds, the firm will move towards raising funds by issuing debts. It will give a last preference to new equity issue in case if above two are not sufficient. When retained earnings are used for, the company can easily win the trust from the market and share prices do not affect adversely while new equity issue carries somewhat negative impression in the minds of investors which in turn have an adverse effect on the market value of current share price.
of the company. So first preference should be given to retained earnings and last preference to be given to new equity issue.

2. **Financial Distress:**

Generally, value of the firm increases with the increase in the financial leverage but debt financing has certain limitations also. It has cost and benefit both. Since EBIT is uncertain, there is always a possibility that it may drop too low to permit the firm to meet its contractual obligations. An increase in debt funds will increase financial distress. So we can say that financial distress is the situation when a firm finds it difficult to honour its commitment to other creditors/debt investors. In context of capital structure, the financial distress refers to the situation when the firm faces difficulties in paying interest and principal repayment to the debt investors. Financial distress arises when the fixed financial obligations of the firm affect the firm’s normal operations. For example, if a firm has to dispose of some of its assets to meet the interest obligations, the firm is said to be in financial distress. There are many degrees of financial distress. One extreme degree of financial distress is the bankruptcy, a condition in which the firm is unable to meet its financial obligation and faces liquidation.

However, still debt financing is used almost unexceptionally because it brings benefits in the form of tax-shield. As a result the firm should try to achieve a tradeoff between the cost and benefits of debt financing.

So a firm should look into the matter while financing its resources. The total cost of financial distress increases with the increase in financial leverage. So there should be tradeoff between the cost of financial distress and tax shield from the use of debt.
As discussed, high level of finance distress leads to bankruptcy because it is very costly. Investors know about levered firms may fall into financial distress. Thus value of the firm can be broken down into three parts; Value of firm is equal to valued of all equity finance-Present valued (tax shield)- present value of end

**Agency Cost:**

The equity investors and lenders do not always agree on the best course of action to protect their claims against the firm. Equity share holders are more interested in residual claim even if it is created due to high degree of financial leverage or with any amount of risk and bond holders or money lenders are keen to have their interest and principal amount back within the given time frame. So they are more interested in safe game. Because of equity holders control the firm’s management and the decision making, their interest will dominate the interest of the bondholders, unless the bondholders take some protective action. Therefore bond holders generally impose some conditions in the loan agreements which may be inclusion of the representative in important decision making or in form of debenture trustees or maintaining current ratio and regular follow up and reporting. All these entail considerable costs. For lower degree of leverage, it is nil or negligible but in highly levered firm, it has a cost. So we can say that for the protection of the interest of money lenders, the company has to incur certain amount of cost which is considered as an agency cost. So while determining capital structure the company should keep in mind this agency cost also.
2.6 Approaches to Set Capital Structure:

The capital structure can be planned and implemented also. Initially there should be a target capital structure to achieve target goals. The finance manager has to keep in mind pros and cons of every source of raising long term loan or equity issues. So capital structure decision is a continuous decision which should be taken keeping in mind a target. There are three most common approaches to decide about the firm’s capital structure.7

2.6.1 EBIT-EPS Approach:

To analyse the impact of debt on shareholders’ return and risk

2.6.2 Valuation Approach:

To determine the impact of debt on the shareholders’ value

2.6.3 Cash Flow Approach:

To analyse the firm’s ability to service debt and avoid financial distress.

2.7 Significance of Capital Structure Decisions

The capital structure decision has got significance from the parties connected with the firm. Every decision about the structure has an impact on stake holders’ mind. One cannot neglect this decision if that one is directly or indirectly involved.8

2.7.1 Management Point of View:

This decision holds much importance for the management. The structure decides the control of the company. Generally management holds major
amount of equity shares and they have the control over the firm.

2.7.2 Investors’ Point of View:

With optimal capital structure, company can increase market value of the firm. So whenever any investor wants to invest his money, he will surely look into the risk and return involved in the firm. Generally, investor would avoid the firm with high amount of risk with uncertain amount of return. So capital structure should be such that it can attract investors to invest in the shares of the company.

2.7.3 Money lenders’ Point of View:

Just like investors, this outsider party also examines the solvency and profitability plus liquidity of the company. They are more concerned about their interest and principal money. So if company’s capital structure is sound, it can attract money lenders also and get finance it wants. Here also risk and return factor matter a lot.

2.7.4 Creditors’ Point of View:

Again, capital structure reflects soundness of the company and it tells you that how money will be raised and utilized. Creditors would not hesitate once they know about the structure and utilization of resources.

2.7.5 Society’s Point View:

With a target capital structure, company can do miracles and ultimate beneficiary is society. So capital structure holds importance from
society’s point of view also. The capital structure should be studied through various types of social elements such as customers, investors, credit institution, labour bureaus, taxation authorities etc.

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