

**CHAPTER – III**

**THEORY**

**OF**

**FINANCIAL AND CAPITAL STRUCTURE**

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## THEORY OF FINANCIAL AND CAPITAL STRUCTURE

After survey of existing literature and before preceding to analysis, it is considered a pre-requisite to have theoretical discussion on financial and capital structure as well as some of the crucial ratios explaining the same. The theoretical discussion is within the scope of this chapter, and ratio analysis is within the scope of next chapter.

### 3.1 INTRODUCTION:

Financial management is as much concerned with the control of liabilities and shareholder's equity as with the control of assets. The liabilities and shareholder's equity are the sources of assets and these two aspects of financial management are extremely interrelated. Capital structure refers to the mix of long-term sources of funds i.e. debenture, long-term debt, preference share capital and equity share capital including reserves and surpluses. Decisions must be made about the kinds and amounts of assets that must be acquired and maintained, but such decisions must be sound about the source from which the assets will be sought. Not only the wise selection and administration of assets but the judicious selection of sources are also required in the success of management. A company should have the right kind and amount of assets to run in each and every conditions. Some companies do not plan their capital structure and it develops as a result of the financial decisions taken by the financial manager without any formal planning. These companies may prosper in the short-run, but ultimately they may suffer considerable

difficulties in raising funds to finance their activities without planning of capital structure. These companies may fail to maximize the use of their funds. Consequently, it is being increasingly realised that a company should plan its capital structure to maximize the use of the funds and it should be flexible to adopt any changes more easily with the changing conditions.

The liabilities and shareholders' equity of a business as the sources of its assets constitutes its financial structure. Accordingly, the management of liabilities and shareholders equity is the building of financial structure. Therefore the financial manager should plan an optimum capital structure of his company. The optimum capital structure is obtained when the market value per share is maximum. The determination of an optimum capital structure is a difficult job and one has to go beyond the theory. The manager should keep the objectives of sound liability and equity management in his mind. There are significant variations among industries and among individual companies, within an industry in terms of capital structure. There are many circumstances and number of influencing factors in the decisions of capital structure. At that time the judgment of the person making the capital structure decision plays a vital role. Two similar companies can have different capital structures if the decision makers differ in their judgment of the significance of various factors. A totally theoretical model perhaps cannot adequately handle all those factors which affect the capital structure decisions. These factors are highly psychological, complex and qualitative and do not always follow accepted theories. Since capital markets are not

perfect and therefore the decisions have to be taken under imperfect knowledge and risk.

From various combinations of amounts and types of liabilities and equity items, decision maker has to decide the best combination to the circumstances and other conditions of the individual company. Firstly, they have to decide on what proportion of the assets can appropriately be sought from creditors and the remaining proportion, therefore must be obtained from shareholders equity. Further decisions are necessary on the proportions that should be sought for short-term and long-term respectively. Finally, the decisions are needed about the extent to which equity contributions by way of accumulation of profits can or should be depended on.

Another way of looking at liability and equity management is to say that it is concerned with "Financing" when decisions have been made about the sources from which assets will be sought. Financing comes into the picture as the actual procedure where by the sources are reached and tapped. Some selected sources may turn out to be unable to provide excellent, so that if financing is to be carried through successfully it must go-off in a different direction. At any cost, the decisions about sources, choices and alternatives and the actual tapping of these sources in financing determine the shape of financial structure. If less desirable sources must be reached because more desirable ones are not fruitful, the presumption is that the resulting financial structure at least in the minds of the financial managers are not so good as the more desirable choices and alternatives would have made them more desirable to the financial structure.

### 3.2 DEFINITION OF FINANCIAL STRUCTURE:

Financial Structure refers to the owners equity and creditors funds. It is the structure of equity capital, preference capital, debentures, reserves and surplus, long-term and short-term loans and current liabilities and provisions. It is the entire left hand side of the balance sheet. Financial Structure refers the way how the firm's assets are managed, capital structure is the permanent financing of the firm, represented primarily by long-term debt, preferred stock and common equity but excluding all short-term credit<sup>1</sup>.

#### Exhibit: 3.1

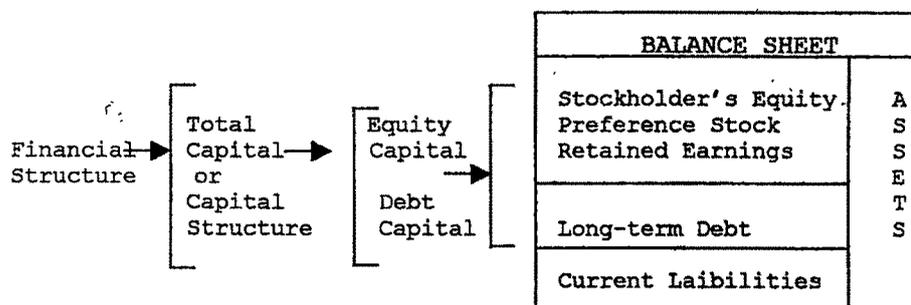


Exhibit-3.1 illustrates the basic breakup of the total capital and also facilitates the distinction between financial structure and capital structure<sup>2</sup>. Thus a firm's capital structure is one of the important component of the financial structure.

Accounting suggest the financial structure of a business as consisting of three elements: assets, liabilities and capital. The relationship among the three can be formed like this<sup>3</sup>:

$$\text{Assets} = \text{Liabilities} + \text{Capital}$$

OR

$$\text{Liabilities} = \text{Assets} - \text{Capital}$$

or

$$\text{Capital} = \text{Assets} - \text{Liabilities.}$$

Thus the assets are sum of the liabilities and the capital; the liabilities are the difference between the assets and the capital, and the capital is the difference between the assets and the liabilities.

Since the liabilities and the capital represent the interests or equities in the business of the creditors and the owners, the equation can also be written as:<sup>4</sup>

$$\text{Assets} = \text{Equities}$$

This equation may be expanded in the following form:<sup>5</sup>

$$\begin{array}{r} \text{Assets} = \text{Equities} \\ \text{(Liabilities)} \end{array} \quad \begin{array}{r} \text{Creditors'} \\ \text{+ Equities} \\ \text{Owners'} \\ \text{(Capital)} \end{array}$$

This equation results in the sum equation as before but with this difference: Here the liabilities and capital are looked upon as being of the same nature i.e. as representing the interests of groups of financial contributors to the enterprise. From this point of view, the left side of the balance sheet may be regarded as a list the property possessed by the enterprise and the right side, a statement of the sources from which the property has been obtained.

The balance sheet covers the fundamental equation which is axiom on which modern accounting has been built. The equation expanded into balance sheet form can be stated as follows:<sup>6</sup>

Assets	=	Equities
Current assets		Creditors' equities
Non-current assets		Current Liabilities Long-term liabilities
		Owners' equities Capital

Thus the balance sheet is a detailed form of the fundamental or structural equation, it sets forth the financial structure of an enterprise. It states the nature and amount of each of the various assets, of each of the liabilities, and of the proprietary interest of the owner or owners.

Describing the nature of the assets, liabilities and capital is not so difficult as to describe their amounts. The amount of liabilities can be more readily stated than those of the assets, and specifically to be the fixed assets, give someone an approximate idea of magnitude for the purpose of studying proportion. But it should always be borne in mind that they are approximations only and thus the results of computations in which they are used cannot be more than approximations.

One of the important principles of financial analysis is that certain reasonable proportions should exist among various items in the financial structure of a business enterprise. The principle may be broadened to include not only the balance sheet items but also two of the items in the income statement, viz, sales and net income.

### **3.3 RELATION TO EQUITIES:**

A fundamental relationship which the analyst examines is the ratio of the equities of the owners to that of the creditors, i.e. the ratio of the amount invested by creditors. One of the art of the business management consists of buying goods on credit and selling them rapidly enough to obtain funds to pay for them, thus financing the inventory on creditors' money. The creditors are thus investors in the business, either voluntarily or involuntarily. Another devise for utilizing creditors equities is to borrow money at a certain rate of interest and to use it in one's business to yield a higher rate of return than that at which it was borrowed. This procedure of employing creditor equity has been named "trading on the equity"<sup>7</sup>.

### **3.4 FACTORS INFLUENCING FINANCIAL STRUCTURE:**

The following are the factors which influence the financial structure:<sup>8</sup>

#### **1. Growth Rate of Sales:**

The future growth rate of sales is a measure of the extent to which the earnings per share of a firm are likely to be magnified by leverage. For example, if sales and earnings grow at a rate of 8 to 10% a year, then financing by debt with charges should magnify the returns to owners of the stock.

#### **2. Sales Stability:**

Sales stability and debt ratios are directly related. With greater stability in sales and earnings, a firm can incur the fixed charges of debt with less risk than it can when its sales and earnings are subject to periodic declines. In the

later case, it will have difficulty in meeting its obligations. The stability of the utility industry combined with relatively favourable growth prospects, has resulted in high leverage ratios in that industry.

### **3. Competitive Structure:**

Debt servicing ability is dependent on the profitability and volume of sales. So the stability of profit margins is equally important as the stability of sales. The ease with which the new firms can expand capacity will influence profit margins. A growth industry promises higher profit margins but such margins are likely to narrow if the industry is one in which the number of firms can easily increase through additional entry.

Other firms in other industries are more able to resist competitive pressures. For example, to duplicate the unique technical, service and distribution facilities of IBM would be very difficult, indicates that profit margins for those firms are less subject to erosion.

### **4. Asset Structure:**

Asset structure influences the sources of financing in several ways. Firms with long-term fixed assets, especially when demand for their output is assured, use long-term mortgage debt extensively. Firms whose assets are more returnable, and the inventory whose value is dependent on the continued profitability of the individual firm such firms rely on long-term financing as well as on short-term financing.

**5. Management Attitude:**

The management attitude which directly affects the choice of financing are

- i. Control of the enterprise, and
- ii. Risk.

Large corporations whose stock is widely owned, may choose additional sales of common stock because they will have little influence on the control of the company. On the other hand, the owners of the small firms may prefer to avoid issuing common stock in order to be assured of continued control. Because they generally have confidence in the prospects of their companies and can see the large potential gains for themselves resulting from leverage. Managers of such firms are often willing to incur high debt ratios.

**6. Lender's Attitude:**

Irrespective of management's analysis lenders' attitude are very important determinants of financial structure. In the majority of cases, the corporations discuss its financial structure with lenders and give much weight to their advice.

**7. Nature of Industry:**

There can be wide variations in the use of financial structure among industries and among the individual firms in each industry. Service industries use the most leverage, reflecting (i) that services include financial institutions, which as a group have high liabilities, and (ii) that there are many smaller firms in the service industries, and small firms as the group are heavy users of debt.

Public utility use of debt stems from a heavy fixed assets investment, coupled with extremely stable sales. Mining and manufacturing firms use relatively little debt because of their exposure to fluctuating sales. Within the broad category "manufacturing" wide variations are observed for individual industries.

### **3.5 STAKE-HOLDERS FOR FINANCIAL STRUCTURE:**

The following para discusses the stakeholders for financial structure, who have different points of view towards it.

#### **1. Management:**

A sound financial structure helps the management of the company in the planning of fixed assets, future expansion, modernization and development of technology and other activities. It also helps the management in obtaining loans from financial institutions, banks, and other lenders at reasonable rate of interest, and in increasing profitability of the company without creating additional financial burden. Management can also measure the effectiveness of its own policies and decisions in context of the results of its management efforts.

#### **2. Investors:**

The investors, viz, shareholders and debentureholders are interested in the company's financial structure for the safety of their investment in the company. The debentureholders analyze the long-term financial position of a company to determine the degree of safety of their

principal amount as well as interest. On the other hand, the shareholders are interested in the overall financial structure and the retained earnings of the company in order to determine the safety and the return on their capital employed. A large amount of equity capital in the capital structure of the company provides an adequate margin of safety to debentureholders and other investors for their investment in the company. If the company can earn more and pay more interest and dividend to the shareholders and debenture holders, it can acquire sufficient amount whenever it requires.

### **3. Creditors:**

Creditors, who have lent money for short-term and long-term, are interested in the liquid position of the company in order to get back their principal amount of debt on maturity and in the long-term financial position of the company to determine the ability of the company in order to repay the debt in time, respectively. They are also interested in the current obligations and they believed that it should be paid when it becomes payable.

### **4. Bankers:**

Bankers are primarily concerned with the company's ability to pay its current debt. They wish not only repayment of advances but also their repayment of loans at proper time. For this purpose, they analyze long-term as well as short-term sources of funds used by the company before granting loans and advances. A sound financial

structure provides to the bankers to their amount invested in the company.

#### **5. Government:**

Government is also interested in the financial structure of the company in order to regulate the capital issues of the company and would like to check whether they are following all the rules and regulations of the Government or not. It is also interested in the financial structure of the company for the purpose of taxation, control costs, prices and profits.

#### **6. Employees:**

Employees are interested in the financial structure of the company for their demand for increase in the wages and other facilities at the work place. The employees' wages to a great extent depend on the success of the company. Thus the past experience of the operating performance and the current financial position of the company is often studied to measure the ability of the company to meet the new wage commitments. Not only that they have a right to demand for their great efforts to the company, but they are also the praise worthy for the success of the company. By their efforts the company can grow and prosper.

#### **7. Researchers:**

The analysis of financial structure enables the research scholars and financial analyst to study the financial policies perused by the management and on the basis of their studies they

can offer constructive suggestions to overcome any financial melody disclosed.

#### **8. Society:**

Society is also interested in the financial structure of the company. Because the society provide them employees, finance and the moral support for survival and growth. In other words, the prosperity of surrounding area depends on the prosperity of the company. With sound financial position of the company, it can fulfill its social responsibility by providing the facilities of schools, hospitals and agricultural guidance to the farmers, pure drinking water and other welfare activities.

#### **9. Others:**

The stock exchanges, economists, trade associations, economic and commercial research institutions, labor bureaus, news agencies and educational institutions are all interested in the financial structure of the company and the current financial position of the industry as a whole. A sound financial structure not only stimulates the growth of a company but also contributes to the growth of national economy.

### **3.6 MEANING OF CAPITAL STRUCTURE :**

Generally, the Board of Directors and the Chief Financial Officer of a company should develop an appropriate capital structure which is most advantageous to the particular company. This can be done only when all influencing factors to the company's capital structure are properly analyzed and balanced while

planning the capital structure of the company, the interest of the shareholders and the financial requirements of a company should take into consideration. The equity shareholders, the real owners and the providers of the equity capital (risk) would be concerned about the ways of financing a company's operations. However, the interest of other groups like employees, creditors, customers, society and Government should be given reasonable consideration. Generally, the wealth maximization is the main target of every company and would try to achieve that goal which directly affect the interests of other groups. Thus while developing an appropriate capital structure of its company the financial manager should aim at maximizing the long-term market price per share. There may be a certain point within which the market value per share is maximum. The management of a company may fix its capital structure by which they make maximum use of favourable leverage subject to other requirements such as flexibility, solvency, control and norms set by the financial institutions, the Security Exchange Board of India (SEBI) and stock exchanges.

'Capital structure' sometimes known as financial plan refers to composition of long-term sources of funds such as debentures, long-term debts, preference share capital and ordinary share capital including reserves and surpluses. According to Hampton, "A firm's capital structure is the relation between the debt and equity, securities that make-up the firm's financing of its assets"<sup>9</sup>. According to Childs, "Capital structure includes all long-term obligations and equity that is only items of permanent capital"<sup>10</sup>. Schall and Haley have also observed that the "Capital structure refers to the

proportions of different types of financing used by the firm"<sup>11</sup>. In the words of Archer and D'Ambrosio, "The term capital structure and financial structure are to be considered interchangeable. The term capital structure of the firm means the total of all liabilities and ownership claims the sum of what is usually the credit side of the balance sheet"<sup>12</sup>. Weston and Brigham have indicated the capital structure by the following equations:

$$\text{Capital structure} = \text{Long-term debt} + \text{Preferred stock} \\ + \text{Net Worth}$$

or

$$\text{Capital structure} = \text{Total assets} - \text{Current liabilities}^{13}$$

Therefore, broadly speaking, capital structure is composed of owned funds and borrowed funds; own funds include share capital and free reserves and surplus and borrowed funds represent debenture, loan and long-term loan provided by term financing institutions.

The term 'capital' has been defined in many ways. An economist define 'capital' as a wealth, which is used in the production of additional wealth. Businessman use the word 'capital' in the sense of the total assets employed in a business. The accountant use the word in the sense of net assets or stockholder's equity. The capital structure is made up of debt and equity securities which comprise a firm's finance of its assets. It is the permanent financing of a firm represented by long-term debt plus preferred stock and net worth. Financial authorities and experts differ in respect of composition of funds in capital structure.

According to Oshorn, "The term capital structure is used to mean the financial plan according to which all assets of a corporation are furnished. This capital is supplied by long-term and short-term borrowings, the sale of preferred and common stock and the reinvestments of earnings"<sup>14</sup>. He further stated that, "In analysing the capital structure of an enterprise, short-term debt is often excluded from consideration"<sup>15</sup>. Many others include only long-term sources of funds under the capital structure. Guthmann and Dougall stated that "capital structure may be used to cover the total combined investment of the bondholders including any long-term debts such as mortgages and long-term loans as well as original investment"<sup>16</sup>. Both the concepts of capital structure have their own merits and demerits. The later concept is more popular and widely accepted. As such the following principles have been used in explaining the composition of capital structure<sup>17</sup>.

#### **1. Cost Principle:**

According to this principle, ideal pattern of capital structure is one that tends to minimize cost of capital and maximize the earnings per share. The debt capital is cheaper than equity capital. The first thing is that, cost of debt is limited and the bondholders do not have the right to demand in exceeded profits, if earned, rate of interest on bonds is usually less than the earnings per share. Secondly, interest on debt is deductible for income tax purpose, whereas no deduction is allowed for dividends payable on stock. Consequently, effective rate of interest which the company has ultimately to bear would be

less than the rate of interest at which bonds are issued. The preference share capital is also cheaper than the equity capital but is not as cheap as debt. Thus in order to minimize the overall cost of capital, a company should employ a large amount of debt.

Thus, when one considers the leverage and the cost of capital factor a firm should employ a large amount of debt provided its earnings do not fluctuate very widely. In fact debt can be used to the point of the minimum average cost of capital.

## **2. Risk Principle :**

This principle suggests that such a pattern of capital structure should be devised so that the company does not run the risk of bringing on a receivership with all its difficulties and losses. Since bond is a commitment for a long period, it involve risk. If the expectations and plans on which the debt was issued change, debt may prove fatal to the company. For example, income of the corporation declines to such a low level that debt service which is a contractual obligation can not be met out of current income. The debt may be highly risky for the company because the bondholders in that case may lose a part or all of their assets. Similarly, if the company issues large amount of preferred stock, equity-holders may be left with little or no income after satisfying fixed dividend obligations in the year of low earnings. Assumptions of large risk by the use of more and more debt and preferred stock affects the share values and share prices may

consequently lend to nosedive. This would result in capital loss to the common stockholders.

As just opposite to this, since common stock does not entail fixed charges nor the issuer is under legal obligation to pay dividends, the corporation does not incur risk of insolvency, of course, issue of additional common stock may result in decline in the earnings per share of the old common stockholders owing to dilution of earnings.

Risk principle places relatively greater reliance on common stock for financing capital requirements of the corporation and forbids as far as possible the use of fixed income bearing securities.

### **3. Control Principle:**

While choosing different types of securities the financial manager should keep in mind that controlling position of present owners remains undisturbed. The use of preferred stock and also bonds offer a means of raising capital without jeopardising control. The management desiring to retain control must raise funds through bonds.

Since common stock carries voting rights, issue of new common stock will dilute the control of existing shareholders. Thus a shareholder, who had pre-dominant control over the affairs of the company would lose this position because new stockholders would share control with him. But this does not mean that the corporation should increase the possibility of the corporation's bankruptcy, and the corporation might suffer the

consequences of reorganization and liquidation. Instead of foregoing entire business of the corporation by introducing greater doses of debt, it would be more desirable to issue common stock and share control with new stockholders.

#### **4. Flexibility Principle:**

According to flexibility principle, the management should strive towards achieving such combinations of securities that the management finds it easier to maneuver sources of funds in response to major changes in need for funds. Not only several alternatives are open for assembling required funds but also bargaining position of the corporation is strengthened while dealing with the suppliers of funds. For example, if a company is top heavy with debt and has mortgaged all its fixed assets to secure presently outstanding debt, it may find it difficult to obtain loan.

#### **5. Timing Principle:**

Timing is always important in financing and more particularly in a growing concern. Maneuverability principle is sought to be adhered in choosing the types of funds so as to enable the company to seize market opportunities and minimize cost of raising capital and obtain substantial savings. An important point to be kept in mind is that public offering should be made of such securities that are greatly in demand. Depending on business cycles, demand of different types of securities oscillates. In times of boom, when there is all round business expansion and economic prosperity and investors have a strong desire to

invest, it is easier to sell equity shares and raise ample resources. But in periods of depression, bonds should be issued to attract money because investors are afraid to risk their money in stocks which are more or less speculative. Thus timing may favour debt of one time and common stock or preferred stock at other times.

### 3.7 CAPITAL STRUCTURE PLANNING:

The capital structure is a complex and controversial issue. While planning the capital structure at the time of commencement of the business, expansion and development of the business or reconstruction of the financial structure, the financial decision makers must keep two objectives in mind in relation to their financial policy<sup>18</sup>.

- a. To see that the return earned on the total long-term funds employed in a business is steadily maintained at the maximum sustainable level, and
- b. To arrange the raising of long-term funds that the long-term return to the shareholders both in terms of income and capital appreciation is maximized.

The companies do not plan their capital structure and it develops as a result of the financial decision taken by the financial manager without any formal planning<sup>19</sup>. These may prosper in the short-run but ultimately they will face considerable difficulties in raising funds on favourable terms in the long-term, with an unplanned capital structure. These companies will also fail to economise the use of their funds. It is being increasingly realized that a company should plan its capital structure to maximize the use of funds and

to be able to adopt more easily to the changing conditions. A balanced capital structure observe that proper relationship between debt capital and equity capital which adopts to the level of business uncertainty and risk. The proper use of debt financing is one of the crucial decision areas of corporate financial management as it influences the shareholders' return and risk.

### **3.8 DETERMINANTS OF CAPITAL STRUCTURE:**

Following are some of the determinants of capital structure:

#### **1. Nature of the Business:**

Manufacturing concerns operating under competitive conditions have to adopt equity financing since their sales and earnings are not stable to warrant issue of debentures with fixed interest. On the other hand, public utility concerns having an assumed market, stable sales and free from competition may find it easy to employ more debt in their capital structure<sup>20</sup>. Generally the profits of these concerns are more stable and predictable and therefore, they can safely take on more debt and incur higher fixed charges.

#### **2. Size of the Business and Capacity to raise Funds:**

Smaller companies confront a tremendous problem in assembling funds because of their poor creditworthiness. Investors are afraid from investing their money in securities of these companies. Lenders prescribe highly restrictive terms for lending to them. Such companies

therefore, have to employ more equity in their capital structure<sup>21</sup>. In contrast to this larger companies with greater stability of earnings, strength and reputation, find it easy to raise funds from the capital market and other financial agencies. These companies therefore employ more debt in their capital structure. Their capital structure is more economical and balanced.

Moreover small companies find great difficulties in raising long-term loans. If it is able to obtain some long-term loans, it will be available at a higher rate of interest and at inconvenient terms and therefore, its capital structure becomes very inflexible and even its management can not run business freely without any interference. Therefore, it depends on share capital and retained earnings for their long-term funds. It is quite difficult for small companies to raise share capital from the capital markets. Moreover most of capital base companies are so small that they are not allowed to be registered in the stock exchanges. Some of small companies which are able to approach the capital markets, the cost of issuing shares is generally more than the large one. The shares of a small company are not widely scattered and the dissident group of shareholders can be easily organized to get control of the company.

Therefore the size of the firm has an influence on the amount and the cost of funds, but it does not necessarily determine the pattern of financing.

### **3. Age of the Companies:**

Younger companies find it difficult to raise capital in the initial years as their earnings are highly unpredictable, irregular, uncertain and fluctuating. They are also not known to the supplier of funds. These companies therefore have to depend largely on equity capital. In contrast, well established companies with a stable earning record and assured profit, comparatively find it easy to raise capital from whatever sources they like. Such companies therefore, employ more debt in financing their capital structure.

### **4. Growth Rate:**

Growth rate is a very important factor to determine the capital structure of a company. Faster growing companies need to rely more on debt capital than slower growth companies. The financial requirements of faster growing companies are high and cannot be met adequately from internal sources. Since flotation costs of issuing shares are higher than costs of debt, faster growing companies employ more debt than slower growing companies. In recent years the Reliance Industries Limited raised substantial funds from debt sources to finance its massive investment scheme.

### **5. Assets Structure:**

Composition and liquidity of assets may also influence the capital structure decision of the company. Companies with long lived fixed assets especially when demand for their output is relatively assured use long-term debt extensively.

Similarly, companies whose assets are mostly receivables and inventory and whose value is dependent on the continued profitability rely less on long-term debt financing and more on short-term debt. The less liquid the assets of the company the less use of the long-term debt by the company.

#### **6. Market Condition:**

Conditions in the money market have important bearing on the company's capital structure. No capital structure can be planned perfectly without in depth study of trends of the capital market. As a general rule, shares sell best during the saturation stage of the business cycle and debenture sell best during the recovery stage. As the trend of capital market is fluctuating, some degree of flexibility should be incorporated in the capital structure of the company as a hedge against the possibility of having to finance under adverse circumstances.

If the share market is depressed the company should not issue equity shares but issue debt and wait to issue equity shares till the share market revives. During boom period in the share market, it may be advantageous for the company to issue shares at high premium. This will help to keep its debt capacity unutilized. A highly levered company may find it difficult to raise additional debt. A company may find it difficult to issue any kind of security in the market merely because of its small size. Other factors which are the cause of low rating of the company are, the heavy indebtedness, low payout, small size, low profitability, high

degree of competition etc. would make it difficult for the company to raise external finance at favourable terms.

#### **7. Early Repayability:**

A considerable degree of flexibility will be introduced if a company has the discretion of early repaying its debt and preference share capital. This will enable management to retire or replace cheaper source of finance for the expensive one whenever warranted by the circumstances. When a company has excess cash inflows and does not have profitable investment opportunities, it becomes desirable to retire debt. Similarly, a company can take advantage of a declining rate of interest if it has a right to repay debt as its option.

#### **8. Attitude of Investors:**

Attitudes of investors is one of the most important factor in setting up the capital structure. Because the capital market are changing continuously. At one time, the market favours debenture issues and at another time, it may readily accept share issues. Due to the changing market situations, there may be a chance to change the attitudes of investors because they are interested in the dividends and capital gains. If they are not satisfied, they will sell their shares or debentures and reinvest their funds in whatever the source they like.

**9. Attitude of Management:**

In designing the capital structure, sometimes the existing management is governed by its desire to continue control over the company, particularly in the case of the firms promoted by entrepreneurs. The existing management team not only wants control and ownership but also to manage the company without any outside interference.

**10. Financial Leverage:**

The use of the fixed charges sources of funds such as debt and preference capital along with the owner's equity in the capital structure is described as financial leverage. The company can finance its investments by debt and/ or equity or may also use preference capital. The rate of interest on debt is fixed and the company has a legal binding to pay interest on debt. The preference dividend is also fixed but it is paid when the company earns profits.

It depends on the company that what type of sources they would like to employ. It also depends on the nature and types, size, capital intensity, technology, market condition, management attitudes of the company. The faster growing company prefer the debt-equity, because every time it is not possible for them to raise funds from the internal equity. The financial leverage employed by a company is intended to earn more on the fixed charges funds than their costs. The well established and reputed companies could employ

high leverage in its capital structure while it is not advantageous for the new company.

#### **11. Taxation:**

Taxation is one of the most important factor in setting up the capital structure of the company. Taxation plays a very important role in capital structure. The interest paid to debt holders is treated as a deductible expense. The return to debt holders is not subject to the 'taxation' at the corporate level. This makes debt financing cheaper. In their 1963 article, Modigliani Miller show that the value of the firm will increase with debt due to the deductibility of interest charges for tax computation, and the value of the levered firm will be higher than of the unlevered firm<sup>22</sup>.

Because of the tax deductibility of interest charges, a firm can increase its value or lower its cost of capital continuously with leverage. In practice, firms do not employ large amounts of debt nor lenders are ready to lend beyond certain limits and therefore firms would adopt a target 'debt ratio, hence there is no way to violate the limits of the debt level imposed by lenders.

#### **12. Government Regulations:**

Government regulation is also a very important factor influencing the capital structure of a company, as the policy is changing frequently. The taxation policy of Government has an influence on the capital structure. Debt issues can save taxes since interest is a tax deductible expense.

### 3.9 OPTIMUM CAPITAL STRUCTURE:

Optimum capital structure denotes the best combination of loan capital and equity capital. It is obtained when overall cost of capital is the minimum or the value of the firm is the maximum. The value of the firm will be maximized or the cost will be minimized when the marginal real cost of each source (debt and equity) is the same. The real cost of debt will include explicit costs like interest and implicit costs like the lower market value of shares. If the real cost of debt is lower than the real cost of equity it will increase the proportion of debt. This process will reach a point where the real cost of debt and equity will be the same. This is the optimum capital structure for a particular firm. The real cost of debt after this point will be more than the real cost of equity.

In 1958 Modigliani and Miller published an article which highlighted the conflicts among various theories regarding optimal capital structure. The authors showed that there was no optimal capital structure. They subscribed the net operating income theory. Given their assumptions, it is impossible to argue with either their logic or conclusions. Other theorist, however, believe that the assumptions are not correct.

Soloman has outlined in very clear form the three positions regarding optimal capital structure<sup>23</sup>. These are the net income approach (NI), the net operating income approach (NOI) and the traditional approach. Under net income approach, the cost of debt and cost of equity are assumed to be independent to the capital structure. The weighted average cost of capital declines and the total value of the firm rises with increased use of leverage. Under the net operating income approach

(NOI), the cost of equity is assumed to increase linearly with leverage. Therefore, the weighted average cost of capital (K) remains constant and the total value of the firm also remains constant as leverage is changed<sup>24</sup>. This means that leverage does not affect directly to the cost of capital. Under the traditional approach the cost of capital declines and the value of the firm increases with leverage up to a prudent debt level and after reaching the optimum point (minimum cost of capital or maximum value of the firm) leverage causes the cost of capital to increase and the value of the firm to decline.

Thus, if net income approach is valid, leverage is a significant variable and financing decision goes on right angle which effect on the value of the firm. If net operating income approach is valid, then the financing decision should not be fruitful, because it does not affect the valuation of the firm. According to the traditional approach one has a middle position. There is a best combination of equity and debt where the total value of the firm maximizes and the cost of capital minimizes. Thus the traditional approach implies that the cost of capital is not independent of the capital structure of the firm and there exists an optimal capital structure.

A company's cost of capital is independent of its financial structure is not valid. As far as the leverage effect alone is concerned, there does exist a clearly defined optimum position the point at which the marginal cost of debt is equal to or greater than a company's average cost of capital<sup>25</sup>.

The value of the firm depends upon its expected earnings and the firm's required rate of return or the

cost of capital. The capital structure decision can affect the value of the firm either by changing the expected earnings or the cost of capital or both. Leverage cannot change total expected earnings of the firm but it can affect the residual earnings of the shareholders. The effect of leverage on the cost of capital is not very clear. If leverage affects the cost of capital and the value of the firm, an optimum capital structure would be obtained for that combination of debt and equity which maximizes the total value of the firm or minimizes the weighted average cost of capital. The question of existence of optimum use of leverage has been put by Solomon very clearly in the following words<sup>26</sup>:

"Given that a firm has a certain structure of assets which offers net operating earnings of given size and quality and given a certain structure of rates in the capital market. Is there some specific degree of financial leverage at which the market value of the firm's securities will be higher or the cost of capital will be lower, than at other degree of leverage?"

The optimum capital structure keeps a balance between share capital and debt capital. In the words of Kuchhal "An Optimum capital structure by properly accounting for the effects of risk, leverage income, control and other relevant factors will minimize the overall cost of capital to the firm and provide a correct cut-off value per investment decisions<sup>27</sup>."

### **3.10 TAXATION AND CAPITAL STRUCTURE:**

In their 1958 article, Modigliani and Miller provide an important analytically sound and logically consistent behavioural justification in favour of their

hypothesis. They argued that, in the absence of taxes a firm's market value and the cost of capital remain unchanged with changes in the capital structure. Their assumptions are very important to discuss this hypothesis, and are related to the behaviour of the investors and capital market, the actions of the firm and the tax environment. Their basic assumptions are as follows:

1. Capital markets are perfect. Information is freely and readily available and share and debts are traded in the perfect capital markets. There are no transaction costs. Investors are free to buy or sell their securities. They do not have any restriction to borrow. They are well informed and choose a combination of risk and return that is most advantageous to them.
2. Investors have similar expectations. The expected values of the probability distributions of expected operating earnings for all future periods are the same as present operating earnings.
3. Firms can be grouped into equivalent 'risk classes' on the basis of their business risk.
4. They assume that there is no corporate income tax.
5. Firms distribute all net earnings to the shareholders.

#### **BASIC PROPOSITIONS I:**

Modigliani and Miller derived three proposition from their assumptions. They argued that the total market value of the firm is equal to its expected operating income divided by the discount rate appropriate to its risk class. The total market value is

independent of the debt-equity mix or leverage. It can be expressed as follows:

Value of the firm = Market value of equity + Market value of debt

$$V = \frac{\text{Expected net operating income}}{\text{Expected overall capitalization Rate}}$$

$$V = S + D$$

$$\frac{\bar{X}}{K_0} = \frac{\text{NOI}}{K_0}$$

Where,  $V$  = the market value of the firm,

$S$  = the market value of the firm's ordinary equity,

$D$  = the market value of debt,

$\bar{X}$  = the expected net operating income on the assets of the firm,

$K_0$  = the capitalisation rate appropriate to the risk class of the firm.

This proposition can be stated in an equivalent way in terms of the firm's average cost of capital. Which is the ratio of the expected earnings to the market value of all its securities.

$$\frac{\bar{X}}{(S+D)} = \frac{\bar{X}}{V} = K_0$$

If one defines  $K_d$  as the expected return on the firm's debt and  $K_e$  as the expected return on the firm's equity,

Expected net operating income =  $\bar{X} = K_oV = K_eS + K_dD$ .

Modigliani Miller concluded that the total market value of the firm is unaffected by the financing mix, it follows that the cost of capital is independent of the capital structure and is equal to the capitalisation rate of equity.

**PROOF OF MODIGLIANI MILLER ARGUMENT:**

The Arbitrage Mechanism: According to Modigliani and Miller, the simple principle of proposition I is taken to discuss their proof they considered two similar firms in the same risk class with the same expected operating income but different financial leverages. Firm one is financed by equity and the another one is financed by a mixture of equity and debt. Due to the advantage of the alternate investment strategy, a number of investors will sell their shares in levered firm and buy shares and bonds of unlevered firm. It will result into increase in the price of unlevered firm's shares and to decline the price of levered firm's shares. It will continue until the equilibrium price for unlevered firm and levered firm's shares is reached. On the other hand, the value of the unlevered firm is greater than the value of the levered firm. Here the history will repeat again. The number of investors will sell their shares in the unlevered firm and buy the shares and debentures of the levered firm. Therefore, the market value of the levered firm's shares will increase and the market value of unlevered firm will decline.

It will continue until the price of levered firm's shares equal to that of the unlevered firm. On the basis of this process Modigliani and Miller concluded that the

market value of a firm is not affected by leverage. It does not have any impact on the maximization of market price per share. This indicates that the financing decision is irrelevant. And it also implies that one capital structure is as much desirable as the other.

**PROPOSITION II:**

The expected earnings on equity is equal to the average cost of capital plus a premium. This premium is equal to the debt-equity ratio times the difference between the average cost of capital and the cost of debt<sup>28</sup>.

The cost of equity is a linear function of leverage, measured by the market value of debt to equity. Thus leverage will result not only in more earnings per share but also increase in cost of equity. The leverage benefit has been taken off by the increased cost of equity and therefore, the firm's market value will remain unaffected.

The very important part of the Modigliani-Miller (MM) thesis is that average cost of capital will not rise even if very excessive use of leverage is made. This inference could be valid if the cost of borrowing, remains constant for any degree of leverage. But in practice, generally the cost of debt increases with leverage beyond a certain acceptable level of debt. However, the MM maintain that even if the cost of debt is increasing the weighted average cost of capital will remain constant. They also argued that when cost of debt increases, cost of equity will increase at a decreasing rate and may even turn down eventually<sup>29</sup>.

The value of the firm is independent of its policy, this hypothesis of MM is based on the critical

assumption that corporate income taxes do not exist. But in real practice, corporate income taxes exist and interest paid to debt holders is treated as a deductible expenses. But on the other hand, dividends paid to shareholders are not tax deductible. Therefore, the return to debt holders is not subject to the taxation at the corporate level. Hence, debt financing becomes advantageous. According to MM the value of the firm will increase with debt due to the deductibility of interest charges for tax calculations and the value of the levered firm will be higher than that of the unlevered firm<sup>30</sup>.

The levered firms after tax earnings consist of operating income and interest tax shield. In case of the unlevered firm, the after tax earnings are simply after tax operating income. The cash flows arising on account of interest tax shield are less risky than the operating income, which is subject to business risk. Interest tax shield depends on the corporate tax rate and the firm's ability to earn proper profit to meet its current obligations. The corporate tax rates do not change very frequently. The levered firm can be assumed to earn at least equal to its current obligation, otherwise it would not like to borrow or will stop to borrow. Thus, the cash in-flows from interest tax shield becomes less risky and they should be discounted at a lower discount rate. Therefore, one can assume that the risk of interest tax shield is the same as that of the interest payments generating them, which is required rate of return by debt holders. And, therefore the present value of interest tax shield

$$= \frac{\text{Tax rate} \times \text{Interest}}{\text{Cost of Debt}}$$

Thus, the present value of the interest tax shields is independent of the cost of debt. The value of levered firm is equal to the value of the unlevered firm plus the present value of the interest tax shield.

$$\text{Value of levered firm} = \text{Value of unlevered firm} + \text{Present value of tax shield on interest stream}$$

According to Modigliani Miller's tax corrected view, a firm can increase its value or lower its cost of capital continuously with leverage only due to the tax deductibility of interest charges. Therefore, the firm can reach the optimum capital structure when it employs 100 per cent debt. But in reality, or in general practice firms do not employ large amounts of debt nor the lenders are ready to lend beyond the certain limits. And that's why they suggest that firms would adopt a target debt ratio, by this it could not violate the limits of the debt level imposed by lenders.

Investors are required to pay personal taxes on the income earned by them. From investor's point of view, taxes will include both corporate and personal taxes. Thus, a firm should aim at minimizing the corporate and personal taxes while deciding about borrowing. How do personal income taxes change investor's return and value? Simply, it depends on the corporate tax rate and the difference in the personal income tax rates of investors.

The after tax income available to the shareholders and debt holders should be reduced in respect of the personal tax. Similarly the interest tax shield after personal tax has also been reduced. Particularly, in our

country, dividends are treated differently from interest income for tax purpose. Some of interest income are tax deductible upto Rs.9,000 for individuals. After this point they are required to pay tax at a tax rate applicable to them, which may go upto 30 per cent. Dividends gain by shareholders are tax exempt, while capital gains are treated for tax purposes. The tax rate on capital gains are also varied depending on whether it is long-term or short-term. Tax on capital gain is paid only when they are realized. Thus, individual can defer paying tax on capital gains for a long period if he does not realize them and therefore, his tax on equity income will be zero. Interest income received by individuals is taxed, while it is not taxed at the corporate level. Dividends are taxable at the corporate level while it is possible to avoid tax on capital gains at the personal level and pay no tax on the current dividend.

In short, MM model implies that the existence of the corporate taxes provide a strong incentive to borrow. In fact, it is ideal for a firm to have 100 percent debt in its capital structure. Miller's Molel considers corporate as well as personal taxes. They said that the advantage of corporate borrowing is reduced by the personal tax loss.

### **3.11 FINANCIAL DISTRESS:**

It is quite difficult for a firm to borrow 100 percent debt. The main reason for not borrowing 100 percent debt is financial distress. A firm exposed to higher business risk faces a greater chance of financial distress. Because the business risk of a firm depends on the operating risk, size of the business, nature of the business, keen competition, price elasticity, economic

conditions, extent of diversification etc.. Financial distress occurs when the firm find it difficult to meet its current obligations. The financial distress might turn into insolvency, which is the extreme position of financial distress. It could be very expensive. It involves legal costs also. To meet its all obstacles or expenses the firm may have to sell its assets at a distress price or at a lower prices. More important consideration is the inflexibility of raising funds when needed if the firm has already used heavy amount of debt. It can adversely affect the operating performance of the firm.

But financial distress has some indirect costs also. It has a great effect on the attitude of management. The shareholders may like the management to invest in risky, marginal projects so that debt holders' wealth is transferred. Management may also avoid investment in profitable projects. Since under an insolvency, debt holders are likely to benefit more from such investments. Creditors also loose their patience when a firm faces financial problems. They force the firm into liquidation to realize their claims. An insolvent firm also has a tendency to stress short-term profitability at the cost of long-term sustainability and profitability. Financial distress reduces the value of the firm. The reputation of the firm should be reduced due to the financial distress. Therefore,

Value of a levered firm is

$$= \text{value of unlevered firm} + \text{present value of internal tax shield} - \text{present value of financial distress.}$$

### **3.12 APPROACHES TO ESTABLISH APPROPRIATE CAPITAL STRUCTURE:**

While establishing a new firm, the management should keep the most important point in mind that there should be an optimum capital structure, which minimizes the cost of capital. The initial capital structure should be designed with proper care. The management of the company should set a target capital structure and the subsequent financing decisions should be made with a view to achieve the target capital structure. The financial manager has to deal with an existing capital structure. The company needs funds to finance its activities continuously. Every time when funds are to be raised, the financial manager has to study the advantages and disadvantages of various sources of finance and select the sources contributing to achievement of the target capital structure. Thus, the capital structure decision is a continuous process and has to be taken whenever a firm needs additional finances.

The following are the most common approaches to decide about a firm's capital structure<sup>31</sup> :

- 1. EBIT-EPS approach**
- 2. Valuation approach**
- 3. Cash flow approach.**

#### **1. EBIT-EPS APPROACH :**

Each and every business uses equity as well as debt to finance its all activities continuously. The use of fixed cost sources of finance such as debt and preference share capital to finance the assets of the company is known as financial leverage. If the assets are financed with the use of debt yield a return should

be greater than the cost of debt, the earnings per share also increases without an increase in the owner's investment. The earnings per share also increases when the preference share capital is used to acquire assets. But the leverage impact is more clear in case of debt because

- a. the cost of debt is usually lower than the cost of preference capital and
- b. the interest paid on debt is tax deductible.

Because of its effect on the earnings per share, leverage is an important factor in planning the capital structure of a company. The companies with the high level of the EBIT can make profitable use of the high degree of leverage to increase return on the shareholders equity. The impact of leverage can be examined through the relationship between earning per share and various possible levels of EBIT under alternative methods of financing.

The EBIT-EPS analysis is an important tool for the financial manager to get an insight into the firm's capital structure management. The finance manager can consider the possible fluctuations in EBIT and examine their impact on EPS under different financial plans. If the probability of earning a rate of return on the firm's assets less than the cost of debt is insignificant, the large amount of debt can be used by the firm to increase the earnings per share. This may have a favourable effect on the market value per share. On the other side, if the probability of earning a rate of return on the firm's assets is less than the cost of debt is very high. The firm should refrain from employing debt capital. It may adversely affect on the market value per share.

## 2. VALUATION APPROACH (for determining the impact of debt on the shareholders' value):

The expected rate of return depends on the degree of risk assumed by investors. Generally, a high degree of risk is assumed by shareholders than debt holders. The rate of interest on debt is fixed and the company is legally bound to pay interest whether it makes profit or not. For equity shareholders the rate of dividend is not fixed. The Board of Directors has no legal obligation to pay dividends even if the profits are made by the company. Whereas the funds of debt holders are returned within a prescribed period, the shareholders will have to share the residue only when the company is wound up. This leads one to conclude that debt is a cheaper source of funds than equity. This is generally the case even when taxes are not considered. The tax deductability of interest charges further reduces the cost of debt. The preference share capital is also cheaper than an equity capital, but not as cheap as debt. Thus, while using the component as a criterion for financing decisions and ignoring risk, a firm would always like to employ debt since it is the cheapest source of funds. The order in which preference is given to external equity first or last are known as:

- a. Trade-off Theory, or
- b. Pecking Order Hypothesis, respectively.

Both these theories are discussed in the following lines:

### a. TRADE-OFF THEORY:

Financial managers have to plan their capital structure. It is the main function and their valuable responsibility. Therefore, financial managers always

think of the firms debt-equity decision as a trade-off between interest tax shields and the costs of financial distress. Actually they have to decide the judicious mix of debt and equity in the capital structure. The cost of capital play a very important role in the framework of the debt-equity. The specific cost of capital does not consider the entire issue. It ignores risk and the impact on equity value and cost. Therefore, the impact of financing decision on the overall cost of capital should be evaluated and the criterion should be to minimize the overall cost of capital structure or to maximize the value of the firm. When one considers the tax shield advantage of debt on account of interest tax deductability, then debt would have a favourable impact on value and would help to minimize its overall cost of capital. Obviously, there may be some difference of opinion about how valuable interest tax shields are and what kinds of financial troubles are most challenging, but these disagreements are not forever. After some time they themselves realized that a company can not continuously minimize its overall cost of capital by employing debt. Beyond reaching the certain point the debt becomes more expensive because of the increased risk of excessive debt to the creditors as well as to the shareholders. When the degree of leverage increases, the risk of creditors also increases, and they demand a higher interest rate. Even the excessive amount of debt makes the shareholders' position very risky. This has the effect of increasing the cost of equity. Up to a certain point the overall cost of capital decreases with debt but beyond that point the cost of capital would start increasing and therefore it would not be advantageous to employ more debt. So, there must be a

combination of debt and equity which minimizes the firm's average cost of capital and maximizes the market value per share. In general practice, there is a range of debt-equity ratio within which the cost of capital is minimum or the value is maximum. This range can be found out empirically and the firm can operate safely within that range.

A firm's optimal debt ratio is usually viewed as determined by a trade-off of the costs and benefits of borrowing, holding the firm's assets and investment plans constant. The firm is portrayed as balancing the value of interest tax shields against various costs of bankruptcy or financial embarrassment. Of course, there is a controversy about how valuable the tax-shields are, and which, if any, of the cost of financial embarrassment are material, but these disagreements give only variations on a theme. The firm is supposed to substitute debt for equity, or equity for debt, until the value of the firm is maximized<sup>32</sup>.

Trade-off theory of capital structure recognizes that the target debt ratios may vary from firm to firm and industry to industry. It depends on the capital structure of the particular company or a firm. Companies with safe tangible assets and plenty of taxable income to shield ought to have high target ratios. While unprofitable companies with risky intangible assets ought to rely primarily on equity financing.

If, there are no costs of adjusting capital structure, then each firm should always be at its target debt ratio. But it is not possible for each firm. There are costs, and therefore some delays in adjusting to the optimum level. Firms are unable to offset the random events immediately from their capital structure targets,

so we should see random differences in actual debt ratios among firms having the same target debt ratios.

This trade-off theory of capital structure choice tells a comforting story. Unlike MM theory<sup>33</sup>, which says that firms should take on as much debt as possible, it avoids extreme predictions and rationalizes moderate debt ratios. But all companies do not behave accordingly. The trade-off theory of capital structure does not explain how companies actually behave in all cases. In some cases the trade-off theory successfully explains many industry differences in capital structure. The companies with high technology, risky and mostly intangible assets normally use relatively little debt.

The trade-off theory also helps to explain what kinds of companies "go private" in leveraged buyouts (LBOS). Leverage buyouts are just acquisitions of public companies by private investors who finance a large fraction of the purchase price with debt. The target companies for leverage buyouts takeovers are usually mature, cash earned business with established markets for their products, but little in the way of high Net Present Value growth opportunities. That makes the clear sense by the trade-off theory, because, these are exactly the kind of companies that ought to have high debt ratios. This theory also says that the companies can run or grow with extra heavy debt too much to pay down with a couple of years internally generated cash should issue stock. Constrain dividends, or sell-off assets to raise cash to rebalance capital structure. However, it cannot explain why some of the most successful companies grow with little debt. Generally, the most profitable companies borrow the least. Here the trade-off theory fails, or it predicts the reverse.

Under the trade-off theory, high profits should mean more debt servicing capacity and more taxable income to shield and should give a higher target debt ratio. This unexplained part is explained by pecking order hypothesis.

**b. PECKING ORDER THEORY:**

Under this hypothesis, the cost of equity includes the cost of new issue of shares and the cost of retained earnings. The cost of debt is cheaper than the cost of equity funds. While considering the cost of new issue and retained earnings, retained earning is cheaper because, shareholders have to pay personal taxes on distributed earnings while no taxes are paid on retained earnings as also no flotation costs are incurred when the earnings are retained<sup>34</sup>. As a result, among two sources of equity funds retained earnings are preferred. It has been found in practice that firms prefer internal finance. If the internal funds are not sufficient to meet the investment outlays, firms go for external finance issuing the safest security first. They start with debt first, then possibly hybrid securities such as convertible debentures, then perhaps equity as a last resort<sup>35</sup>. Myers, was the first person who called it the Pecking Order Theory, since there is not a well defined D/E target and there are two kinds of equities internal and external, one at the top of pecking order and one at the bottom. In contrast to the static trade-off theory, Myers explain the pecking order theory as under<sup>36</sup>:

1. Firms prefer internal finance.
2. They adapt their dividend payout ratios to their investment opportunities, while trying to avoid sudden changes in dividends.

3. Sticky dividend policies, plus unpredictable fluctuations in profitability and investment opportunities, means that internally generated cash flow is sometimes more than capital expenditures, and at other time less. If it is more, the firm pays off debt or invests in marketable securities. If it is less, the firm first draws down its cash balance or sells its marketable securities.
4. If external finance is required, firms issue the safest securities first. That is they start with debt, then possibly hybrid securities such as convertible bonds, then equity as a last choice.

In this theory there is no well defined target debt equity mix, because there are only two kinds of equity, i.e. internal and external. One is at the top of the pecking order and one is at the bottom. Each firm observes that the debt-equity ratio reflects its accumulative requirements for external finance only.

The Pecking Order theory explains why the most profitable firms generally borrow less? not because they have low target debt equity ratios, but because they don't need the outside money, similarly, less profitable firms issue debt because

1. they do not have enough internal funds for their capital investment program,
2. debt financing is first on the Pecking Order of external financing,
3. debt is a cheaper source of finance in view of the tax advantage occurring on payment of interest,
4. debt is more convenient to be procured from financial institutions vis-a-vis equity, and

5. compared with equity issue, institutional borrowings cause lower transactional cost<sup>37</sup>.

The pecking order theory depends on -

1. Sticky dividend policy,
2. a preference for internal funds, and
3. an aversion to issuing equity.

Some people believe that financial managers do not strive for optimal financing decisions, but simply finance by the line of least resistance. If so, then internal funds would be their first choice. Internal funds relieve financial managers to contact with outside investors and the "disciplinary influence of the securities market". Suppose these comfortable people have to seek external financing then debt goes on the line of least resistance.

A Pecking order might also be arising from fully rational economic motives like from differences in issue costs. Internal funds do not have any issue costs but if outside money is needed, issue costs are less for debt than for equity. Thus it makes quite clear to use retained earnings, rather than external equity and to build up financial slack, in the form of cash, marketable securities, or unused debt capacity to reduce the profitability that a future stock issue will be necessary.

Financial managers are also worried about the adverse signal transmitted to investors when equity is issued. Actually, the stock issues are bad news to investors. Even the announcement of a stock issue drives down stock price. On the other hand, debt issuing seems to be no news at all, or at worst a trivial disappointment<sup>38</sup>.

A pecking order in financing could reflect managers attempts to minimize issue costs and to avoid the adverse signals conveyed to investors when equity issues are announced. The pecking order theory stresses the value of financial slack. Without financial slack, the company may be caught at the bottom of the pecking order and may be forced to choose between issuing undervalued shares or passing over a positive Net Present Value investment opportunities.

### **3. CASH FLOW APPROACH:**

Conservatism is one of the most important feature of a sound capital structure. It does not mean to employ debt or small amount of debt, it is related to the fixed charges created by the use of debt or preference capital in the capital structure and the firm's ability to generate cash to meet these fixed charges. A company is financed with the appropriate mix of debt equity, if it is able to service its fixed charges under any reasonably predictable adverse conditions.

The payment of interest, preference dividends and principal amount are the fixed charges of the company and they depend on amount of loan securities and the terms of payment. If the company employs a large amount of debt or preference share capital with short-term maturity, the amount of fixed charges will be high. The company is legally bound to pay interest whether it makes profit or not. Therefore, when a company thinks of raising additional debt, it should analyze its expected future cash flows to meet its fixed charges. If a company is not able to generate enough cash to meet its fixed obligations, it may have to face financial insolvency. Therefore, it is possible for a high growth

and profitable companies to suffer from cash shortage if its working capital management is poor. It becomes risky to employ fixed charge sources of finance by those companies whose cash inflows are unstable and unpredictable.

One important ratio which should be examined at the time of planning the capital structure is the debt service ratio (net cash inflows to fixed charges). It indicates the number of times the fixed financial obligations are covered by the net cash inflows generated by the company. The greater the coverage, the greater is the amount of debt a company can use. However, a company with a small coverage can also employ a large amount of debt if there are not significant yearly variance in its cash inflows and a small probability of the cash inflows being considerably less to meet fixed charges in a given period. Thus it is not the average cash inflows but the yearly cash inflows which are important to determine the debt capacity of a company. Fixed financial obligations must be met when due, not on an average or in most years but always<sup>39</sup>.

From above theoretical discussion it emerges that the financial structure is the mirror of business situation and capital structure is one of the important component thereof. Various, theoretical developments have taken place, especially in the area of capital structure. The chapter also discusses the determinants of financial and capital structure. Hence, the next chapter presents the theoretical discussion of various ratios indicating and affecting to financial and capital structure.

## REFERENCES

1. Weston, I.F. and Brigham, E.F.: Essentials of Managerial Finance, The Dryden Press, Hinsdale, Illinois, 1977, p. 407.
2. Bansal, A. : "The EBIT-EPS Approach to Capital Structure" The Management Accountant, Feb. 1994, p.79.
3. Myer, J.N.: Financial Statement Analysis, Prentice Hall of India Ltd., New Delhi, IVth Ed., 1969, p. 178.
4. Ibid. p. 178.
5. Ibid. p. 178.
6. Ibid. p. 179.
7. Ibid. p. 180.
8. Weston, I.F. and Brigham, E.F.: Essentials of Managerial Finance, The Dryden Press, Hinsdale, Illinois, IVth Ed., 1977, pp. 421-423.
9. Hampton, John, J.: Financial Decision Making Concepts, Problems and Cases; Reston Publishing Co., Inc. Reston Virginia, Ed. 1976, p. 277.
10. Childs, J.F. : "Long-term Financing"; Prentice Hall Inc., Englewood Cliffs, N.J., Ed. 1961, p.99.
11. Schall, L.D. and Haley, C.W.: Introduction to Financial Management; Tata Mc Graw Hill Publishing Co., New Delhi, 1979, p.344.
12. Archer, S.H. and D'Ambrosia, C.A. : The Theory of Business Finance; The Mc Millan Co., New York, Ed. 1967, p. 235.
13. Weston, I.F. and Brigham, E.F.: Essentials of Managerial Finance, The Dryden Press, Hinsdale, Illinois, IVth Ed., 1977, p. 407.
14. Oshorn, R.C.: "Corporation Finance", New York, Harper and Bros., 1959, pp. 140.
15. Ibid. p. 140.

16. Guthmann, H.G. and Dougall, H.E.: Corporate Financial Policy ", New Jersey, Prentice Hall. Inc. 1955, p. 76.
17. Ibid. p. 76.
18. Mall, C. P.: "Trends in Capital Structure of Medium and Large Private Limited Companies", The Chartered Accountant, Dec. 1987, p. 529.
19. Panda, J : Capital Formation in India: A Study of Corporate Sector; B. Publishing Corporation, Delhi, pp. 163-196.
20. Sarkar, J. B. : "The Nature and Analysis of the Capital Structure Changes in the Central Government Companies, 1961-62 to 1969-70", University of Kolkatta, Unpublished Ph.D. Thesis, 1980.
21. Rao, B S. : "Corporate Income Tax and corporate Debt Policy. Indian Manager, June 1976, p.166.
22. Modigliani, F. and Miller, M. H.: "Corporate Income Taxes and the Cost of Capital : A Correction", American Economic Review, June 1966, pp. 433-443.
23. Soloman, E.: "Leverage and the Cost of Capital", The Journal of Finance, Vol. 18, May 1963, pp. 273-279.
24. Soloman, E.: The Theory of Financial Management, Univ. Press, 1963, p. 92.
25. Soloman, E.: "Leverage and the Cost of Capital"; The Journal of Finance, Vol. 18, May 1963, pp. 273-279.
26. Brigham, E. F. and Roman E. J.: Issues in Managerial Finance, Dryden Press, 1976, p. 256.
27. Kuchhal, S.C.: "Corporation Finance , Principles and Problems", Chaitanya Publishing House, Allahabad, Ed. 1970, p. 141.
28. Chandra, Prasanna: "Financial Management"; Tata McGraw Hill Pub. Ltd., 1997, p. 260.

29. Modigliani, M.: "The Cost of Capital, Corporation Finance and The Theory of Investment", The American Economic Review, Vol. 3, June 1958, pp. 261-297.
30. Modigliani. F. and Miller. M. H.: "Corporate Income Taxes and the Cost of Capital: A corrections", American Economic Review. Vol. 53, June 1966, pp. 433-443.
31. Pandey, I.M.: "Financial Management", Vikas Publishing House Private Limited, New Delhi, Ed. 1999, p. 720.
32. Myers, S.C.: "The Capital Structure Puzzle"; The Journal of Finance, Vol. 39, July 1984, pp. 575-592.
33. Brealy, R.A. and Myers, S.C. : "Principles of Corporate Structure Finance", Fourth Ed., Mc. Graw Hill Inc., pp. 445-446.
34. Under the recent changes in taxation in India (1997) the shareholders have been expempted from paying taxes on dividend income. On the other hand companies will have to pay 10% tax on the dividends distributed by them.
35. Myers, S.C.: "The Capital Structure Puzzle"; The Journal of Finance, Vol. 39, July 1984, pp. 581-582.
36. Myers, S.C.: "The Capital Structure Puzzle"; The Journal of Finance, Vol. 39, July 1984, pp. 575-592.
37. Suresh Babu and P.K.Jain: "Empirical Testing of Pecking Order Hypothesis with references to Capital Structure Practice in India"; Journal of Financial Management and Analysis, 1998, p. 69.
38. Eckbo, B.E.: "Valuation effects of Corporate Debt offerings"; Journal of Financial Economics, Vol 15, Jan-Feb 1986, pp. 119-151.
39. Johnson, D.A. : "The Behaviour of Financial Structure and Sustainable Management"; Autumn, 1981, pp. 30-35.