CHAPTER II

CAPITAL STRUCTURE AND PROFITABILITY – THEORETICAL ISSUE
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-THEORETICAL ISSUE

For understanding, analysing and evaluating a particular system, a sound theoretical background of such system is a pre-requisite. To examining the objectives stated earlier, this chapter is devoted to a brief review of some theoretical issues like capitalisation, capital structure and sources of finance.

Financial management is important because it has an impact on all the activities of a firm. Its primary responsibility is to discharge the finance function successfully. It touches on all other business functions. All business decisions have financial implications, and a single decision may financially affect different departments of an organisation. Hence, “Financial management may be considered to be the management of the financial function. It may be described as making decision of financial matters and facilitating and reviewing their execution. It may be used to designate the field of study which lies beneath process”.

32
CAPITALISATION

Capitalisation is used in its quantitative aspect and refers to the amount at which a company's business can be valued. The term capitalisation has been differently defined by different writers each authority giving his own interpretation to the term. In legal terms, it refers to the total per value of the authorised share capital of the company. Capitalisation means a company's ownership capital and its borrowed capital as represented by its longterm indebtedness. A company is said to fairly capitalise when its earning shares are sufficient to yield a fair return on the amount of equity share capital. Over capitalisation exists when the earnings, of the company are not enough. On the other hand, undercapitalisation occurs when the rate of earnings of similar companies in the industry. In other words, a company is under capitalisation, when its earnings are high but at the same it has low capital base.

The concepts of capitalisation are dynamic since they change with variations in the earnings of a company in the same industry.

Those under capitalisation are lesser evil both under as well as over-capitalisation should be avoided and the ideal should be of fair capitalisation.
CAPITAL STRUCTURE

Formulation of a suitable capital structure is more significant in the financing policy of a company. Capital structure represents the proportionate relationship between capital and ownership capital to the total capitalisation of the company. Capital structure, sometimes known as financial plan, refers to the composition of long term sources of funds, such as debentures, long-term debt, preference share capital and equity share capital including reserves and surplus. It is therefore, a crucial task for the management to determine a proper financing mix of debt and equity in its capital structure. While a defective capital structure very often has caused the business failures, the absence of the same, however, may not guarantee the success of the enterprise in the future because its success depends on other factors also. Thus the capital structure is not static in its contents but is related to the dynamic of the company.

TRADING ON EQUITY

A company earns the profits on its total capital (borrowed and owned). On the borrowed capital (including preference capital) company pays interest or dividend at a fixed rate.

If this fixed rate is lower than the general rate of earnings of the company, the ordinary shareholders will have an advantage in the form of additional profits. This may be referred to as trading on equity. This “trading on equity” is an arrangement under which a company makes use
of borrowed funds including preference capital bearing a fixed rate of interest or dividend in such a way as to increase the rate of return on equity shares. The rate of dividend on equity shares neither could nor, otherwise issue of equity share raises go beyond the general rate of earning if whole of its capital.

FACTORS INFLUENCING THE CAPITAL STRUCTURE

The factors, which determine the mix is, discussed the internal, external and general factors. Internal factors like the cost of capital, risk, dilution of value, acceptability, transferability, matching fluctuation needs against short-term sources increasing owner’s profits, surrender operational control and future flexibility.

INTERNAL FACTORS

1. Cost of capital
2. Risk
3. Dilution of value
4. Acceptability
5. Transferability
6. Matching fluctuating needs against shot-term source
7. Increasing owner’s profits
8. Surrender operations control
9. Future flexibility
EXTERNAL FACTORS

a. General level of business activity
b. Level of interest rates
c. Level of stock prices
d. Availability of funds in the money market
e. Tax policy on interest and dividends

GENERAL FACTORS

1. Size of business and character of capital requirements
2. Growth age and size of firm
3. Operational characteristics
4. Continuity of earnings
5. Flexibility
6. Marketability of securities
7. Government influence
8. Financial leverage
9. Market price of equity stock
10. Corporate taxation

GOVERNMENT POLICY

Government policy, stages of business cycle and the norms of the controller of capital issues relating to debt and equity. Heavy investment in fixed assets and regularity of earning in the case of public utilities enable them to have larger proportion of debt capital in their structure.
Hence there is no such ideal capital structure that can be adopted by all companies. Each company chooses its own capital structure as to the motives of liquidity and profitability.

**SOURCES OF LONG-TERM FUNDS**

The principal long-term sources of funds for a company are equity share capital, preference share capital, debentures, institutional loans, bank credit, fixed deposits, and retained earnings or internal generation of funds.

**Equity Share Capital:**

Equity share means, the holders of such shares are the residual claimants and have no preference in capital as well as in the income of the company. They occupy a primary position in a company’s financial structure. Only equity shareholders control the affairs of the company and enjoy the familiar range of benefits. They carry with them the responsibilities, which are usually associated with ownership.

Their fortunes rise and fall with the affluence of their company and with the state of business psychology. Thus, equity shareholders provide the “venture capital” of the company.

**Preference Share Capital:**

The preference share capital represents a portion of share capital with certain preference and limitations. Preference dividend is not an
obligatory payment. This type of sources can be tapped when the earnings are not sufficient to meet the fixed interest on debentures most of the capital intensive industries have obtained substantial proportion of their initial capital in the manner without burdening themselves with fixed changes in the early years of their existence.

**Debentures:**

A debenture is an acknowledgement of debt by a company under its seal. The terms and conditions on which they are issued are given on the back of security. As shares are equal parts of share capital, debentures are equal parts of a loan raised by a company. Like shares they are offered to the public through prospectus. The debentures may be secured either by floating or fixed charge or unsecured.

Failure to meet debentures interest and capital within the specified time jeopardizes the solvency of the company.

**Institutional Loan:**

Institutional loans means financing of the industry with the finances provided by the institutions established especially for the purpose. These institutions provide long-term loan to industry with the aim of providing cheap finance. Long-term funds can also be raised from various financial institutions such as Industrial Finance Corporations. Commercial Bank also provides long-term loans. These sources provide
the bank of long-term funds required by a company. The rate of interest is much lower and the interest on loans is also tax deductible.

**Fixed Deposit:**

Fixed deposits have been traditional sources of finance in India and they have come to prominence in recent years. Because the deposits can be obtained from the public with lesser cost than from the banks and financial institutions.

**Retained Earnings:**

The amount left after paying dividend is known as retained earnings. It is a free reserve available for meeting any future liability—seen or unseen or for strengthening the financial position of the company or for planning the expansion programmes. It is usually known as "ploughing back of profits and is an important source of internal financing". Thus management of earnings is an important obligation of the financial management in order to run the business smoothly.

Retained earnings as a source of finance, which is retained in the business. This source of finance is not available for a newly formed company. It consists of general reserve, capital investment, subsidy investment allowance resource, development rebate resource and others. It is used for private sector companies to retain a part of the earning and re-invest in the business, irrespective of the prospective rate of return from year to year. This kind of source will increase the earning per share.
Factors to be considered in planning the capital structure:

a. Income  
b. Risk  
c. Control  
d. Flexibility  
e. Timing  
f. Regulatory norm  

Income:

To understand the consequences of alternative financing plans on the income of equity stockholders, two issues may be raised:

a) What is the implication of alternative financing plans on earnings per share?

b) What is the impact of financial leverage on return on equity?

c) Without attempting detailed quantitative analyses of these issues, broad qualitative answers may be given here:

When the level of earnings before interest and taxes are low, from the point of view of earnings per share, equity financing is more favorable than debt financing. On the other hand, when the level of earnings before interest and taxes is high, from the point of view of earnings per share, debt financing is more favorable than equity financing.

When the return on investment (defined as earnings before the interest and taxes divided by total assets) is less than the average cost of
debt (defined as interest burden of debt divided by total debt), financial leverage depresses return on equity. On the other hand, when the return on investment is greater than the average cost of debt, financial leverage enhances return on equity.

**Risk:**

A distinction may be made between business risk and financial risk which is very relevant in the context of capital structure planning. Business risk refers to the variability of Earnings Before Interest and Taxes (EBIT). It is influenced, inter alia, by the following factors:

- **Demand variability** – other things being equal, the higher the variability of demand for the products manufactured by the firm, the higher is its business risk.

- **Price variability** – A firm that is exposed to a higher degree of volatility for the prices of its products is in general characterised by a higher degree of business risk in comparison with similar firms, which are exposed to a lesser degree of volatility for the prices of their products.

- **Variability for input** – when input prices are highly variable business risk tends to be high.

- **Proportion of fixed costs** – If fixed costs represent a substantial proportion of total costs, other things being equal, business risk is
likely to be high. This is because when fixed costs are high, EBIT is more sensitive to variations in demand.

- Financial risk represents the risk emanating from financial leverage. When a firm employs a high proportion of debt in its capital structure i.e. when it has a high degree of financial leverage, it carries a high burden of fixed financial commitment. Equity stockholders, who have a residual interest in the income and wealth of the firm, are naturally exposed to the risk arising from such fixed commitments. Such risk, referred to as the financial risk, is in addition to the business risk faced by equity stockholders.

Control:

If a firm wants to raise additional capital it may go for debt finance, or a rights issue of equity stock, or a public issue of equity stock, or a combination of two or more of these. The pros and cons of the three basic ways or raising additional finance are shown below:

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<th>Basic ways</th>
<th>Pros</th>
<th>Cons</th>
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<tr>
<td>Rights issue of equity stock</td>
<td>No dilution of control - No financial risk</td>
<td>Severe limits the financing ability of the firm Higher cost</td>
</tr>
<tr>
<td>Debt finance</td>
<td>No dilution of control Lower Cost</td>
<td>Financial Risk</td>
</tr>
<tr>
<td>Public issue of equity stock</td>
<td>No financial risk</td>
<td>Dilution of control Higher cost</td>
</tr>
</tbody>
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Since the rights issue option severely limits the financing ability of the firm the present owners may lack resource or inclination or both—the options, which may merit serious consideration, are debt finance and public issue of equity stock. In evaluating these options, among other things, the issue of control is important.

Generally, the control issue is critical at four points: when the equity holding of the promoters is reduced below 100%, below 50%, below 40% and below 26%. The introduction of outside owners for the first time represents more of a psychological problem and less of a managerial one.

Once outsiders participate in equity ownership the original promoters would be concerned when their share in ownership likely to fail below 50 per cent. It may be difficult for many owners to cross this hurdle.

**Hurdles:**

The last major hurdle in India seems to be 26 per cent. This stems largely for a provision of company law according to which 75 per cent of the votes are required to pass a special resolution. It implies that a shareholding of 26 per cent is adequate to block any special resolution. In practice, of course, effective control can be exercised with a smaller holding also.
This is the reason why many business houses have brooked dilution of their holdings, in companies controlled by them, to much lower levels. Essentially, they seemed to have reconciled to dilution because that appeared to be the only way to facilitate expansion and growth. However, the recent episodes of Delhi Cloth General Mills Limited and Escorts India Limited, which sharply highlighted the risks associated with dilution, have introduced conservatism in business circles.

Flexibility:

Flexibility refers to the ability of a firm to raise capital from any source it wishes to tap. It provides maneuverability to the finance manager. Generally, if the rate of return earned on equity is satisfactory, the firm can raise further equity capital because the debt-equity ratio can fall to zero. However, as the debt-equity ratio is normally not permitted to exceed a certain level (which may be specified by the Controller of Capital Issues, or determined by the financial institutions, or indicated by the capital market), the firm cannot presume that it can always raise further capital by issuing debt securities.

The timing and magnitude of such developments cannot be easily forecast. Hence, the finance manager must maintain a certain unused debt capacity, which provides an insurance against adverse developments in future. Flexibility, however, has its own drawbacks, particularly for a
growing firm. If such a firm, in order to maintain reserve bond
capacity, issues equity stock at a time when the market is not fully
appreciative of its growth prospects, the price at which the equity stock
can be sold may be much less than its intrinsic value based on its growth
prospects.

Timing:

Suppose a firm has determined that it should have debt and equity
in equal proportions in its capital structure.

Does it mean that every time it raises finances, it will tap debt and
equity in equal proportions? This does not happen for two reasons:

a. Financing often is 'lumpy' process- so it is difficult for the firm to
maintain strict proportions each time it raises finances.

b. The conditions in the capital market may not always be favorable
for raising finances from the sources, viz., debt and equity.

Hence, timing of security issues is an important aspect of
financing. The firm has to often decide whether it must make an equity
issue now followed by a debt issue later, or vice versa. If the future is
known with certainty, it is easy to determine the optimal sequence of
financing on the basis of the anticipated changes in the capital marke
Unfortunately, due to uncertainties characterising the capital mark
future changes cannot be forecast accurately.
Regulatory Norms:

Norms of the Controller of Capital Issues: The Controller of Capital Issues generally grants his consent for capital issue when the following norms are satisfied:

a. The debt-equity ratio does not exceed 2:1. For large capital-intensive projects a higher debt-equity ratio of 4:1 or even 6:1 may be allowed. (Debt for this purpose is defined as long-term debt plus preference capital, which is redeemable after 12 years. Equity is defined as paid-up capital plus central subsidy plus preference capital, which is redeemable after 12 years).

b. The ratio of preference capital to equity capital does not exceed 1:3.

c. Promoters hold at least 25 per cent of the equity capital.

CAPITAL STRUCTURE THEORIES

Capital structure evaluates the theories, which relate capital structure to value, or the cost of capital of the firm. According to the Valuation approach, an optimum capital structure would exist when the value of the firm is maximised or the cost of capital is minimised. However, two conflicting views exist on the cost relationship between capital structure and the cost of capital or the value of the firm. On the

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other hand, we have the traditionalists’ view who for a long period has been convincingly contending that the value of the firm or the cost of capital is affected by the capital structure changes.

**Net Income (NI) Approach:**

The essence of the net income approach is that firm can lower it cost of capital by using debt. The approach is based on the crucial assumption that the use of debt does not change the risk perception of the investor.

The NI approach to valuation is based on three assumptions: First, there are no taxes; second, that the cost of debt is less than the equity capitalisation rate or the cost of equity; third, that the use of debt does not change the risk-perception of investors.

$$K_0 = \frac{\text{Net Operating Income}}{\text{Total Value of the Firm}} = \frac{\text{NOI}}{V}$$

**Net-Operating Income (NOI) Approach:**

The NOI approach contends that capital structure does not matter, and that the firm cannot affect its overall cost of capital through leverage. Thus, the overall cost of capital remains constant. This result from the fact that as more debt is incurred, equity investors in order to compensate the increased financial risk, increase their capitalisation rate of earnings in such a way as to cancel out the benefit derived from the use of debt and the average cost remains unchanged.
For example cost of equity can be calculated as follows:

$$Ke = K_0 + (k_0 - k_d) \frac{D}{S}$$

**Traditional Approach**

According to this approach, the manner in which the overall cost of capital reacts to changes in capital structure can be divided into three states.

a) In the first stage, the rate at which market capitalises net income either remains constant or rises slightly with debt because of the added financial risk. But it does not increase fast enough to offset the advantage of low cost debt. During this stage, the cost of debt ($k_d$) remains constant or rises negligibly since the market views the use of debt as reasonable policy.

As a result, the value of firm. $V$ or the overall capitalisation rate or the average cost of capital.

$$K_0 = \frac{X}{V} = K_0\left(\frac{S}{V}\right) + K_d\left(\frac{D}{V}\right),$$

Falls with increase in leverage.

Under the assumption that ($Ke$) remains constant with in the acceptable debt limit, the total value of the firm will be

$$V = S + D = \frac{X-KdD}{Ke} + \frac{KdD}{K_d}$$

$$= \frac{X-KdD + D}{Ke}$$
\[ X = \frac{X + (Ke - kd)}{Ke} \]

Thus, so long as debt is within acceptable limit and Ke and Kd remains constant, the value of a firm increases at a constant rate, \((Ke - Kd)/Ke\), as the amount of debt increases.

\[ X = Ke - \frac{(K0 - Kd) D}{V} \]

This implies that within acceptable limit of debt, with \(Ke > Kd\), the average cost of capital will decline with leverage.

b) Once the firm has reached a certain degree of leverage, increase in leverage has a negligible effect on the value, or the cost of capital of the firm. This is so because the increase in the cost of equity due to the added financial risk offsets the advantage of low cost debt. Within that range or at the specific point, the value of the firm will be maximum or the cost of capital will be minimum. Beyond the acceptable limit of leverage, the value of the firm decreases with leverage or the cost of the

c) Capital increases with leverage. This happens because investors perceive a high degree of financial risk and demand a higher equity—capitalisation rate that offsets the advantage of low-cost debt.
The Modigliani and Miller Hypothesis:

Modigliani and Miller hypothesis is identical with the net operating income approach (M-M) argue that, in the absence of taxes, a firm’s market value and the cost of capital remain invariant to the capital structure changes. In their 1958 article, they provide analytically sound and logically consistent behavioral justification in favour of their hypothesis, and reject any other capital structure theory as incorrect.

The M-M hypothesis can be best explained in terms of their propositions I and II. It should, however, be noticed that their propositions are based on the following assumptions.

a) The securities are traded in the perfect capital market situation. This specifically means that
   i) investors are free to buy or sell securities;
   ii) they can borrow without restriction at the same terms as the firms do in the capital market and
   iii) they behave rationally. It is also implied that the transaction costs, i.e., the cost of buying and selling securities, do not exist.

b) Firms can be grouped into homogeneous risk classes. Firms would be considered to belong to a homogeneous risk class if their expected earnings have identical risk characteristics. It is generally implied under the M-M hypothesis that firms within same industry constitute a homogeneous class.
c) The risk of investors is defined in terms of the variability of the NOI. The risk of investors depends on both the random fluctuations of the expected NOI and the possibility that the actual value of the variable may turn out to be different than their best estimate.

d) In the original formulation of their hypothesis, M-M assumes that no corporate income taxes exist.

e) Firms distribute all net earnings to the shareholders, i.e., the dividend payment ratio is 100 percent.

PROFITABILITY – A THEORETICAL ISSUE

Profit is the pivot around which revolve the various activities of a business. Profit acts as the lifeblood for every business whether it is a private organisation, a public undertaking or joint sector entity. The air corporations of India are public sector service organisation. These are expected to earn at least some minimum rate of return on capital employed such return is the result of financial as well as operational efficiency. It is the outcome of all business activities.

Profitability implies profit-making ability of a business enterprise. The term profitability is combination of two words profit and ability profitability may be defined as the ability of a given investment to earn a return on its use.
Profit versus Profitability:

Profit as an absolute figure alone does not give an exact idea of the adequacy of income or of changes in efficiency as shown by the financial performance of an enterprise. Specially, when the problems of historical comparison of a number of years for the same company or of horizontal comparison of a number of companies within the same industry group are confronted with the residual profit figure in absolute quantities may be confusing and difficult to interpret due to variations in the size of investments or the volume of sales. It therefore, becomes necessary to relate profit figures either with the volume of sales or with the level of investment and derive quantitative relationship in the form of either ratios or percentages. Such ratios and percentages are easy to handle and interpret and prove a useful tool in financial analysis. Ratios specially selected to measure the relative profit position of an enterprise are known as profitability ratios.

The profitability can be analysed either on the basis of operating profits or in regard to net profit. It may be noted that the operating profit or in regard to net profit. It may be noted that the operating profit reflects profit from the main business for which the enterprise was launched and offers the most reliable measure for the long-term perspective. On the hand the net profit reflects the net of operating and non-operating income. "It equips the analyst from the short term point of view". The figure of profit may assume any one of the following terms.
a) net profit before interest and tax
b) net profit before tax and
c) net profit after tax.

No doubt, the basis of working out profitability would depend on the analyst as to what he wants to analyse and focus. Thus, the basis will be determined by objective of analysis i.e. whether one wants to judge the overall financial performance of internal management and control or it is to be done for the outside agencies. Like creditors, prospective investors and security dealers of whether one has to keep in mind the owner as the equity holders or a business corporation. In this chapter with regard to various capital structure theories, concepts and profitability of firms are discussed.