6th Semester Program
Financial Management
Unit : 3 Capital Structure Analysis

Compiled By
Nidhi Sahu
Dept. of Commerce
Raniganj Girls' College

Concept Of Capital Structure The term 'structure' means the arrangement of the various parts. So capital structure means the arrangement of capital from different sources so that the long-term funds needed for the business are raised.
Thus, capital structure refers to the proportions or combinations of equity share capital, preference share capital, debentures, long-term loans, retained earnings and other long-term sources of funds in the total amount of capital which a firm should raise to run its business.

Importance of Capital Structure:

The importance or significance of Capital Structure:

1. Increase in value of the firm:
A sound capital structure of a company helps to increase the market price of shares and securities which, in turn, lead to increase in the value of the firm.

2. **Utilisation of available funds:**
A good capital structure enables a business enterprise to utilise the available funds fully. A properly designed capital structure ensures the determination of the financial requirements of the firm and raise the funds in such proportions from various sources for their best possible utilisation. A sound capital structure protects the business enterprise from over-capitalisation and under-capitalisation.

3. **Maximisation of return:**
A sound capital structure enables management to increase the profits of a company in the form of higher return to the equity shareholders i.e., increase in earnings per share. This can be done by the mechanism of trading on equity i.e., it refers to increase in the proportion of debt capital in the capital structure which is the cheapest source of capital. If the rate of return on capital employed (i.e., shareholders' fund + long- term borrowings) exceeds the fixed rate of interest paid to debt-holders, the company is said to be trading on equity.

4. Minimisation of cost of capital:
A sound capital structure of any business enterprise maximises shareholders' wealth through minimisation of the overall cost of capital. This can also be done by incorporating long-term debt capital in the capital structure as the cost of debt capital is lower than the cost of equity or preference share capital since the interest on debt is tax deductible.

5. **Solvency or liquidity position:**

A sound capital structure never allows a business enterprise to go for too much raising of debt capital because, at the time of poor earning, the solvency is disturbed for compulsory payment of interest to .the debt-supplier.

6. **Flexibility:**

A sound capital structure provides a room for expansion or reduction of debt capital so that, according to changing conditions, adjustment of capital can be made.

7. **Undisturbed controlling:**

A good capital structure does not allow the equity shareholders control on business to be diluted.

8. **Minimisation of financial risk:**

If debt component increases in the capital structure of a company, the financial risk (i.e., payment of fixed interest charges and repayment of principal amount of debt in time) will also increase. A sound capital structure protects a business enterprise from such financial risk through a judicious mix of debt and equity in the capital structure.

Factors Determining Capital Structure:

The following factors influence the capital structure decisions:

1. **Risk of cash insolvency:**

Risk of cash insolvency arises due to failure to pay fixed interest liabilities. Generally, the higher proportion of debt in capital structure compels the company to pay higher rate of interest on debt irrespective of the fact that the fund is available or not. The non-payment of interest charges and principal amount in time call for liquidation of the company.

The sudden withdrawal of debt funds from the company can cause cash insolvency. This risk factor has an important bearing in determining the capital structure of a company and it can be avoided if the project is financed by issues equity share capital.

2. **Risk in variation of earnings:**

The higher the debt content in the capital structure of a company, the higher will be the risk of variation in the expected earnings available to equity shareholders. If return on investment on total capital employed (i.e., shareholders' fund plus long-term debt) exceeds the interest rate, the shareholders get a higher return.

On the other hand, if interest rate exceeds return on investment, the shareholders may not get any return at all.

3. **Cost of capital:**

Cost of capital means cost of raising the capital from different sources of funds. It is the price paid for using the capital. A business enterprise should generate enough revenue to meet its cost of capital and finance its future growth. The finance manager should consider the cost of each source of fund while designing the capital structure of a company.

4. **Control:**

The consideration of retaining control of the business is an important factor in capital structure decisions. If the existing equity shareholders do not like to dilute the control, they may prefer debt capital to equity capital, as former has no voting rights.

5. **Trading on equity:**

The use of fixed interest bearing securities along with owner's equity as sources of finance is known as trading on equity. It is an arrangement by which the company aims at increasing the return on equity shares by the use of fixed interest bearing securities (i.e., debenture, preference shares etc.).

6.**Government policies:**

Capital structure is influenced by Government policies, rules and regulations of SEBI and lending policies of financial institutions which change the financial pattern of the company totally. Monetary and fiscal policies of the Government will also affect the capital structure decisions.

7. **Size of the company:**

Availability of funds is greatly influenced by the size of company. A small company finds it difficult to raise debt capital. The terms of debentures and long-term loans are less favourable to such enterprises. Small companies have to depend more on the equity shares and retained earnings.

On the other hand, large companies issue various types of securities despite the fact that they pay less interest because investors consider large companies less risky.

8. **Needs of the investors:**

While deciding capital structure the financial conditions and psychology of different types of investors will have to be kept in mind. For example, a poor or middle class investor may only be able to invest in equity or preference shares which are usually of small denominations, only a financially sound investor can afford to invest in debentures of higher denominations. A cautious investor who wants his capital to grow will prefer equity shares.

9. **Flexibility:**

The capital structures of a company should be such that it can raise funds as and when required. Flexibility provides room for expansion, both in terms of lower impact on cost and with no significant rise in risk profile.

10. **Period of finance:**

The period for which finance is needed also influences the capital structure. When funds are needed for long-term (say 10 years), it should be raised by issuing debentures or preference shares. Funds should be raised by the issue of equity shares when it is needed permanently.

11. **Nature of business:**

It has great influence in the capital structure of the business, companies having stable and certain earnings prefer debentures or preference shares and companies having no assured income depends on internal resources.

12. **Legal requirements:**

The finance manager should comply with the legal provisions while designing the capital structure of a company.

Determinants of Capital Structure of a Firm:

There are numerous factors, both qualitative and quantitative, including the subjective judgment, of financial managers which conjointly determine a firm's capital structure. We may now briefly discuss the key factors governing a firm's capital structure decisions.
The main factors are the following:

1. **Profitability:**

The key word in capital structure is leverage. It can be defined as the employment of an asset or sources of funds for which the firm has to incur a fixed cost or pay a fixed sum (as the return per period).
Operating v. Financial:
Leverage is of two types 'operating' and 'financial'. The leverage associated with investment (or acquisition of assets) activities is referred to as operating leverage, while leverage associated with financing activities is called financial leverage. In general, the higher the level of (EBIT) and the lower the chance of downward fluctuation the larger the amount of debt that can be employed.

2. **Liquidity:**

The analysis of the cash flow ability of the firm to service fixed charges is of considerable importance to carry out capital structure planning.
The Coverage Ratio:
In assessing the liquidity position of a firm in terms of its cash flow analysis, we use a ratio called the coverage ratio. It is the ratio of fixed charges to net cash inflows. It measures the coverage of fixed financial charges (interest plus repayment of principal, if any) to net cash inflows.
In other words, it indicates the number of times the fixed financial requirements are covered by the net cash inflows. The higher the coverage ratio the larger the amount of debt (and other sources of funds carrying a fixed rate of interest) that a firm can use.

3. **Control:**

Another consideration in planning the types of funds to use is the attitude of existing management towards control. Lenders have no direct voice in the management of a company. In most cases, the power to choose the management team rests with the equity holders.
Accordingly, if the main objective of management is to maintain control, they may like to have a greater weight-age for debt and preference share in additional capital requirements. This is so because by obtaining funds through them the management sacrifices little or no control.

4. **Competitive Parity:**

Another factor determining a company's optimal capital structure is the debt-equity ratios of other companies belonging to the same industry and facing a similar business risk. The rationale here is that the debt-equity ratios appropriate for other firms in a similar line of business should be appropriate for the company (under consideration) as well. The use of industry standards provides a benchmark.
If a firm is deviating from its optimal capital structure, the market will give a red signal to the management that there is something wrong in the company's debt-equity mix. If the

firm is out of line, it should identify the causes of such deviation and be satisfied that the reasons are genuine.

5. **The Nature of Industry:**

The fifth determinant of a firm's optimal capital structure is the nature of the industry to which it belongs. The nature of industry largely determines the degree of financial leverage the firm can carry safely without any risk of bankruptcy. If an industry's sales are subject to periodic fluctuations, the firm should have a low degree of financial leverage. Such firms will always have high operating leverage.

6. **Timing of Issue:**

The question of timing of issue is also of considerable importance in determining a company's capital structure. It is often possible to make substantial savings through proper timing of security issues. It is in the Tightness of things to make public offering at a time when the state of the economy as well as the capital market is ideal for providing the required funds.

However, timing should not be the only consideration. "Timing analysis, for example, may suggest use of debt. But the company cannot go in for debt if its existing capital structure is already overloaded with debt.

7. **Characteristics of the Company:**

The nature and characteristics of the company in terms of its size, capital structure and goodwill (credit-standing) also play a very important role in determining the share of old securities and equity in its capital structure.

In general, firms enjoying a higher credit-standing among investors and lenders in the capital market are in a better position to get funds from their choicest sources. If the credit-standing is poor, the firm has limited choice regarding acquisition of funds.

Optimal Capital Structure

What Is Optimal Capital Structure?

The optimal capital structure of a firm is the best mix of debt and equity financing that maximizes a company's market value while minimizing its cost of capital. In theory, debt financing offers the lowest cost of capital due to its tax deductibility. However, too much debt increases the financial risk to shareholders and the return on equity that they require. Thus, companies have to find the optimal point at which the marginal benefit of debt equals the marginal cost.

The optimal capital structure is estimated by calculating the mix of debt and equity that minimizes the weighted average cost of capital (WACC) of a company while maximizing its market value. The lower the cost of capital, the greater the present value of the firm's future cash flows, discounted by the WACC. Thus, the chief goal of any corporate finance department should be to find the optimal capital structure that will result in the lowest WACC and the maximum value of the company (shareholder wealth).

According to economists Modigliani and Miller, in the absence of taxes, bankruptcy costs, agency costs, and asymmetric information, in an efficient market, the value of a firm is unaffected by its capital structure.

Optimal Capital Structure and WACC

The cost of debt is less expensive than equity because it is less risky. The required return needed to compensate debt investors is less than the required return needed to compensate equity investors, because interest payments have priority over dividends, and debt holders receive priority in the event of a liquidation. Debt is also cheaper than equity because companies get tax relief on interest, while dividend payments are paid out of after-tax income.

However, there is a limit to the amount of debt a company should have because an excessive amount of debt increases interest payments, the volatility of earnings, and the risk of bankruptcy. This increase in the financial risk to shareholders means that they will require a greater return to compensate them, which increases the WACC—and lowers the market value of a business. The optimal structure involves using enough equity to mitigate the risk of being unable to pay back the debt—taking into account the variability of the business's cash flow .

Companies with consistent cash flows can tolerate a much larger debt load and will have a much higher percentage of debt in their optimal capital structure. Conversely, a company with volatile cash flows will have little debt and a large amount of equity.

Concept of business risk and financial risk :-

Definition of Business Risk

Business Risk is the probability of earning a comparatively low profit or even suffer losses because of changes in the market conditions, customer demands, government regulations and economic environment of business. Due to such risk, the firm will not generate enough profit to meet out its day to day expenses. The risk is unavoidable in nature.

Every business organization operates in an economic environment. The economic environment includes both micro and macro environment. The changes in the factors of the two environments directly influence the business, and the risk arises. Some of those factors changes in customer tastes and preferences, inflation, change in the policies of the government, natural calamities, strikes, etc. The business risk is divided into various categories:

Compliance Risk : The risk arising due to the change in government laws.

Operational Risk : The risk originating due to the machinery break down, process failure, lockouts by workers, etc.

Reputation Risk : The risk emerging as a result of any misleading advertisement, lawsuit, criticism of bad products or services, etc.

Financial Risk : The risk arising due to the use of debt capital.

Strategic Risk : Every business organization works on a strategy, but due to the failure of strategy the risk arises.

ies:

Definition of Financial Risk

Financial Risk is the uncertainty arising due to the use of debt finance in the capital structure of the company. The capital structure of the company can be made up of equity capital or preference capital or debt capital or the combination of any. The firm, whose capital

structure contains debt finance are known as Levered firms whereas Unlevered firms are the firms whose capital structure is debt free.

Now, you may wonder that debt capital is one of the cheapest sources of funds, then how will it become a risk for shareholders? Because at the time of winding up of the company the creditors are given priority over the shareholders, and they will be repaid first. So in this way, the risk arises that the company will not be able to fulfill the financial obligations of the shareholders due to debt financing. Moreover, financial risk does not end up here as it is a myriad of risks which are given as under:

Market Risk : Risk arising due to the fluctuations in the financial assets.

Exchange Rate Risk : The risk arising out of the variations in the currency rates.

Credit Risk : The risk emerging because of non-payment of debt by a borrower.

Liquidity Risk : The risk originating as a result of a financial instrument is not traded quickly in the market.

Difference Between Business Risk and Financial Risk

The following are the major differences between business risk and financial risk:

1. The uncertainty caused due to insufficient profits in the business due to which the firm is not able to pay out expenses in time is known as Business Risk. Financial Risk is the risk originating due to the use of debt funds by the entity.
2. Business Risk can be evaluated by fluctuations in Earning Before Interest and Tax. On the other hand, Financial Risk can be checked with the help of leverage multiplier and Debt to Asset Ratio.
3. Business Risk is linked with the economic environment of business. Conversely, Financial Risk associated with the use of debt financing.
4. Business Risk cannot be reduced while Financial Risk can be avoided if the debt capital is not used at all.
5. Business Risk can be disclosed by the difference in net operating income and net cash flows. In contrast to Financial Risk, which can be disclosed by the difference in the return of equity shareholders.

Leverage :-

Leverage is an investment strategy of using borrowed money—specifically, the use of various financial instruments or borrowed capital —to increase the potential return of an investment. Leverage can also refer to the amount of debt a firm uses to finance assets. When one refers to a company, property or investment as "highly leveraged," it means that item has more debt than equity.

TYPES OF LEVERAGE:

Concept of DOL, DFL, DTL:-

Degree of Operating Leverage (DOL)

The degree of operating leverage (DOL) assists a company in quantifying its operational risk, i.e., the risk arising from its mix of fixed and variable costs.

DOL measures how sensitive a company's operating income is to changes in product demand, as measured by unit sales. It is the ratio of the percentage change in operating income to the percentage change in units sold.
The relationship can be expressed by the following equation :
DOL =Percentage change in EBIT /Percentage change in sales
Or,
DOL =contribution /EBIT
Where, contribution =Sales - variable cost
EBIT= Contribution - fixed cost

Degree of Financial Leverage (DFL)

The degree of financial leverage (DFL) assists a company in quantifying its financial risk, i.e., the risk relating to how the company finances its operations.
DFL refers to the sensitivity of the cash flows available to the owners of a company when operating income changes.
The relationship can be expressed by the following equation:
DFL= Percentage change inEPS /Percentage change in EBIT
OR,
DFL= EBIT /PBT
Where, PBT =EBIT - Interest

Degree of Toatal Leverage (DTL)

If we combine a company's degree of operating leverage with its degree of financial leverage, we get the degree of total leverage (DTL), which is a measure of the sensitivity of the company's net income to changes in the number of units produced and sold.
The relationship can be expressed by the following equation:
DCL =DOL*DFL
Or,
DCL =contribution /PBT
Or,
DCL = percentage change in EPS / percentage change in sales

Sums on leverage:

Problem 1:

Given Sales Rs.100 million, Variable cost Rs.40 Million and Fixed Cost Rs.40 Million. Find out the Degree of Operating Leverage.
Solution:
Figures in million
DOL = 100-40/100-40-40
=3

Problem 2:

Given Sales Rs.100 million, Variable cost Rs.40 Million and Fixed Cost Rs.40 Million. Capital employed of the Company Rs.80 million with debt equity ratio 1:1. This means debts = Rs.40 million. Debt carries 10% interest. Find out the Degree of Financial Leverage?

Solution:

Interest cost = Rs.4 million.

(Figures are in Rs. Million)

DFL= 100-40-40/100-40-40-4

= 1.25

Concept of Trading on Equity :-

Trading on Equity is a financial process that involves taking more debt to boost the return of the

shareholders. Trading on Equity occurs when a company takes new debt, in the form of bonds , preferred stock, or loans etc. The company uses those funds to acquire assets to generate a return greater than the interest cost of new debt.

Trading on equity – also known as financial

leverage – is considered successful if the company generates a profit and a higher return on investment for the shareholders. Companies, usually, go for trading on equity (instead of raising capital via issue for shares) to improve their earnings per share (EPS).

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