

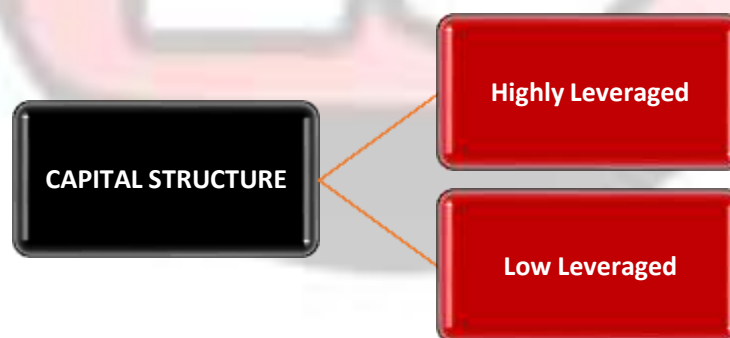
CAPITAL STRUCTURE AND COST OF CAPITAL

CAPITAL

- It refers to **financial resources** that are used by companies to generate income, support operations, invest in projects, or acquire assets.
- The most **crucial component** of starting a **business is capital**. It acts as the foundation of the company.
- **Debt and Equity** are the two primary types of **capital sources for a business**.

CAPITAL STRUCTURE

It is defined as the **combination of equity and debt** that is put into use by a company in order to finance the overall operations of the company and for its growth.



TYPES OF CAPITAL STRUCTURE

Highly Leveraged

When the **proportion of debt capital is significantly high**, it is referred to as a highly leveraged or highly geared Capital Structure.

Low Leveraged

When the **proportion of debt capital is significantly Low**, it is referred to as a Low leveraged or Low geared Capital Structure.

FACTORS INFLUENCING CAPITAL STRUCTURE

COST OF CAPITAL Companies strive to **minimize the cost of capital** by considering the relative **costs of equity and debt financing**.

RISK TOLERANCE Companies with **higher risk tolerance** may use more **debt financing**, while those with **lower risk tolerance** may prefer **equity financing**.

CASH FLOW STABILITY Stable and predictable cash flows may enable companies to **handle higher debt levels**.

TAX CONSIDERATIONS Debt interest payments **may be tax-deductible**, making debt financing more attractive from a tax perspective.

DEGREE OF CONTROL If the promoters of a company, **do not want to dilute their voting rights** beyond a point then **they will prefer** to meet company's need for additional funds by **issuing debt instruments like debentures**.

THEORIES/APPROACHES ON CAPITAL STRUCTURING

NET INCOME APPROACH

- This theory was developed by economists **David Durand and Franco Modigliani**.
- This is a theory that suggests the **capital structure decisions** of a company are **influenced by the level of its net income**.
- The Theory assumes that the **cost of debt remains constant at all levels of debt**.
- According to this theory the **value of a firm can be maximized by selecting the capital structure that minimizes the weighted average cost of capital**.
- As the cost of debt is lower than the cost of equity, the **overall cost of capital (WACC)** can be decreased through **higher debt proportion**, thus increasing the value of the firm.

WEIGHTED AVERAGE COST OF CAPITAL

- It is a **financial metric** that calculates the **average cost of all sources of capital** used by a company to finance its operations.
- It represents the **weighted average of the cost of equity and the cost of debt**, considering their respective proportions in the company's capital structure.

$$\text{WACC} = (\text{Cost of Debt} \times \text{Proportion of Debt}) + (\text{Cost of Equity} \times \text{Proportion of Equity})$$

Cost of Debt × Proportion of Debt

- This represents the **weighted cost of debt**, where the cost of debt is multiplied by the **proportion of debt in the capital structure**.
- It accounts for the **interest expense incurred** by the company on its outstanding debt.

Cost of Equity × Proportion of Equity

AFM FULL COURSE. Whatsapp to 8360944207

- This represents **the weighted cost of equity**, where the cost of equity is multiplied by **the proportion of equity in the capital structure**.
- It reflects the **return required by equity shareholders** based on the risk associated with owning the company's shares.

EXAMPLE

ABC Ltd has its capital structure comprising of 40% debt and 60% equity. The cost of debt is 8% and cost of equity is 12%. Its WACC can be calculated as under:

WACC = (Cost of debt x proportion of debt) + (Cost of equity x proportion of equity)

$WACC = (0.08 \times 0.4) + (0.12 \times 0.6) = 0.032 + 0.072 = 0.104$ OR 10.4%

If the capital structure is changed to 60% debt and 40% equity,

WACC = (Cost of debt x proportion of debt) + (Cost of equity x proportion of equity)

$WACC = (0.08 \times 0.6) + (0.12 \times 0.4) = 0.048 + 0.048 = 0.096$ or 9.6%

Explanation

As the proportion of debt in a company's capital structure increases, the Weighted Average Cost of Capital (WACC) tends to decrease, resulting in an enhanced value of the firm.

NET OPERATING INCOME APPROACH (NOL)

- This theory focuses on the **operating income of a company rather than its net income**.

AFM FULL COURSE. Whatsapp to 8360944207

- This approach suggests that the **value of a firm is primarily influenced by its operating income**, irrespective of the capital structure.
- According to this the **capital structure decisions** of a company do **not significantly impact the firm's value**.
- The **cost of capital** is assumed to **remain constant regardless of the capital structure**. It implies that the WACC is considered to be unaffected by changes in the capital structure.

TRADITIONAL POSITION APPROACH

- The **Traditional Position Approach** suggests that as the proportion of debt capital increases in the capital structure of a firm, the **cost of capital initially decreases** but eventually **increases** after a certain point.
- As the leverage of a firm increases, the **WACC may initially decline up to a certain point**. This is because the **lower cost of debt outweighs the gradual increase in the cost of equity**.
- Once the initial decline is observed, the **WACC may remain relatively constant within a certain range of leverage**. This is because the increase in the cost of equity gradually offsets the benefits of the lower cost of debt.
- **Beyond a certain level of leverage**, the Traditional Position theory suggests that the **WACC starts to increase**. This occurs when the **rising cost of equity surpasses the tax advantages of debt financing**.

IMPORTANCE CAPITAL STRUCTURE

Increased Market Price and Valuation

AFM FULL COURSE. Whatsapp to 8360944207

A firm with a **sound capital structure** has a higher likelihood of experiencing an **increase in the market price of its shares and securities**.

Effective Utilization of Funds

- A good capital structure ensures the **efficient utilization of available funds** within a company.
- It helps **prevent situations** of **overcapitalization or undercapitalization** by enabling optimal allocation of resources.

Enhanced Profitability and Returns

- A well-designed capital structure allows a **company to increase its profits** by providing higher returns to stakeholders.
- This is achieved by **optimizing the mix of equity and debt capital** to maximize returns while balancing risk.

Minimized Overall Cost of Capital

- By establishing an appropriate capital structure, a **company can minimize its overall cost of capital**.
- This is achieved by finding the right balance between equity and debt, taking advantage of the lower cost of debt financing compared to equity financing.

Flexibility in Debt Capital

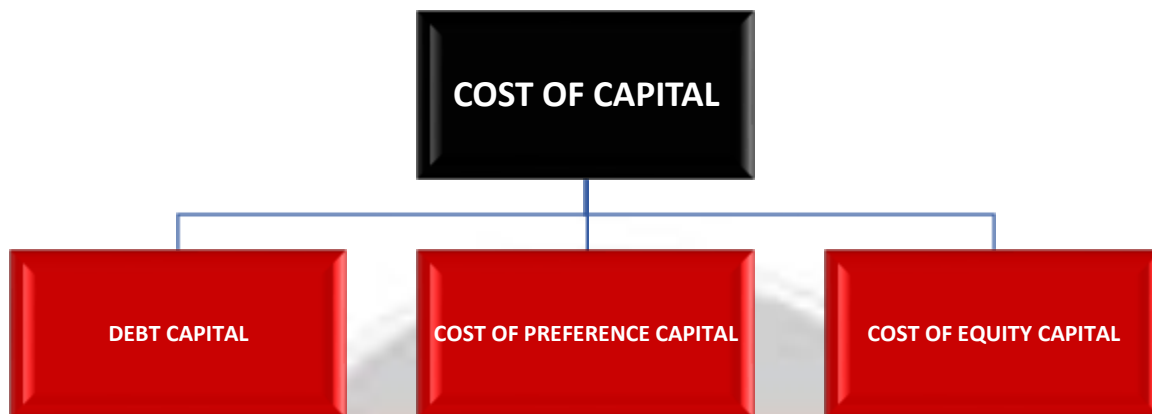
A proper capital structure **provides firms with the flexibility to adjust their debt capital** based on changing circumstances.

COST OF CAPITAL

- The cost of **capital represents the expenses** incurred by a company to **acquire funds, including both debt and equity**.

AFM FULL COURSE. Whatsapp to 8360944207

- It represents the **minimum return that investors or lenders expect** in order to provide capital to the company.



DEBT CAPITAL

It refers to the **portion of a company's capital structure** that is raised through **borrowing funds from external sources**, typically in the form of loans, bonds, or other debt instruments

COST OF DEBT CAPITAL

The cost of debt is the interest rate that a company is **required to pay in order to raise debt capital**.

$$\text{YTM} = \frac{\text{Annual interest payment} + \frac{\text{Maturity value} - \text{Present market value}}{\text{Number of years left to maturity}}}{(0.6 \times P + 0.4 \times M)}$$

- M is the Maturity value
- P is the present market value
- n is the number of years left to maturity.
- 0.6 and 0.4 represent the weights assigned to the present market value (P) and the maturity value (M) of the bond, respectively.

Q:1 A firm's BONDS with face value of 1000 and coupon of 10% p.a. are having a current market price of 900. The number of years left to maturity are 4 years. What is the cost of debt capital for the firm?

Solution

$$\text{YTM} = \frac{\text{Annual interest payment} + \frac{\text{Maturity value} - \text{Present market value}}{\text{Number of years left to maturity}}}{(0.6 \times P + 0.4 \times M)}$$
$$\text{YTM} = \left(100 + \frac{1000 - 900}{4} \right) / (0.6 \times 900 + 0.4 \times 1000), = \frac{100 + 25}{940} = 13.29\%$$

PREFERENCE SHARE CAPITAL

- Preference share capital refers to a type of capital raised by a company through the issuance of preference shares.
- Preference shares, have certain preferential rights and features compared to ordinary shares.

COST OF PREFERENCE CAPITAL

- It refers to the rate of return or cost incurred by a company to raise funds through the issuance of preference shares.
- It represents the required return that investors or holders of preference shares expect for providing capital to the company.

$$\text{YTM} = \frac{\text{Annual dividend payment} + \frac{\text{Maturity value} - \text{Present market value}}{\text{Number of years left to maturity}}}{(0.6 \times P + 0.4 \times M)}$$

- M is the Maturity value
- P is the present market value
- n is the number of years left to maturity.
- 0.6 and 0.4 represent the weights assigned to the present market value (P) and the maturity value (M) of the bond, respectively.

Q:2 A firm's 10 % preference shares with face value of 1000 are having a current market price of 900. The number of years left to maturity are 4 years. What is the cost of preference share capital for the firm?

Solution

$$\text{YTM} = \frac{\text{Annual dividend payment} + \frac{\text{Maturity value} - \text{Present market value}}{\text{Number of years left to maturity}}}{(0.6 \times P + 0.4 \times M)}$$

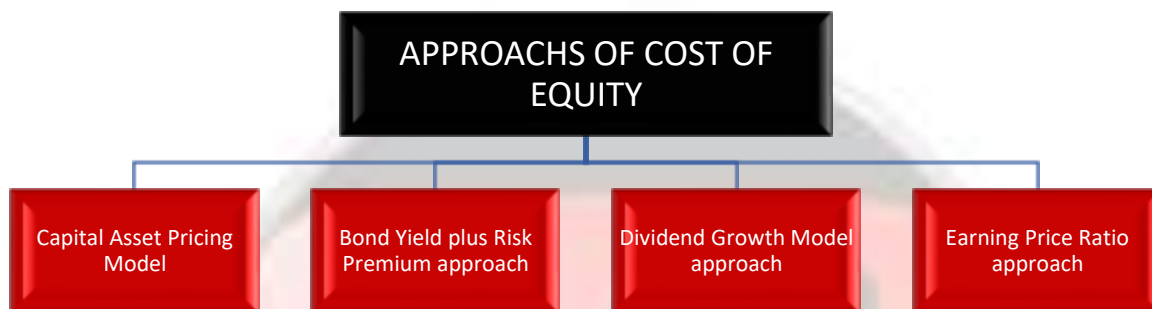
EQUITY CAPITAL

- It refers to the portion of a company's capital structure that is **raised through the issuance of equity shares or common stock.**

- It represents the **ownership interest or ownership stake** held by the shareholders in the company

COST OF EQUITY CAPITAL

Cost of equity is **the percentage of returns payable by the company** to its equity shareholders on their holdings.



Capital Asset Pricing Modelling (CAPM) approach

- The CAPM approach is a widely used method to **determine the cost of equity capital.**
- It considers the **relationship** between the **expected return on equity and the systematic risk of the investment.**

$$\text{Cost of Equity} = \text{Risk-Free Rate} + \text{Beta} \times (\text{Market Return} - \text{Risk-Free Rate})$$

EXAMPLE

Let's say the risk-free rate is 3%, the market return is 10%, and the beta of a company's stock is 1.2.

Solution

Bond Yield plus Risk Premium Approach

- This approach is used to **determine the cost of equity capital.**

AFM FULL COURSE. Whatsapp to 8360944207

- It considers the yield of comparable bonds in the market and adds a risk premium to reflect the Cost of Equity capital.

Example

Suppose a company issues bonds with a yield of 5%, and based on its credit rating and market conditions, a risk premium of 2% is applicable.

Solution

Cost of Equity Capital = 5% + 2% = 7%

Dividend Growth Model Approach

This approach is primarily used for estimating the cost of equity capital based on the expected dividends and the growth rate of dividends over time.

$$\text{Cost of Equity} = \frac{\text{Dividend per Share}}{\text{Current Share Price}} + \text{Dividend Growth Rate}$$

Example

If a company pays an annual dividend of 20 per share, the current share price is 400, and the expected dividend growth rate is 5%.

Solution

$$\text{Cost of Equity} = \frac{\text{Dividend per Share}}{\text{Current Share Price}} + \text{Dividend Growth Rate}$$

Earnings Price Ratio Approach

This approach estimates the cost of equity by comparing the earnings per share (EPS) of a company to the market price per share (P).

Cost of Equity = Earnings per Share / Market Price per Share

Example

If a company has earnings per share of 40 and the market price per share is 800.

Cost of Equity = $40 / 800 = 0.05$ or 5%

WEIGHTED AVERAGE COST OF CAPITAL (WACC)

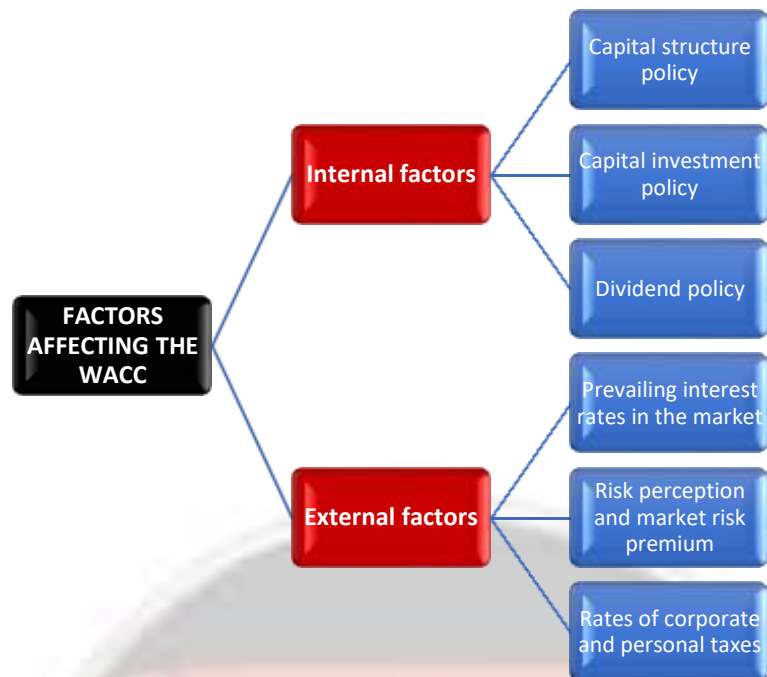
- It is a **financial metric** that calculates the **average cost of all sources of capital** used by a company to finance its operations.
- It represents the **weighted average of the cost of equity and the cost of debt**, taking into account their respective proportions in the company's capital structure.

EXAMPLE

Equity capital 40% with 20 % cost, Preference capital 10% with 10 % cost, Debt capital 50% with 10 % cost

$WACC = (0.20 \times 0.4 + 0.10 \times 0.1 + 0.10 \times 0.5) = 0.08 + 0.01 + 0.05 = 0.14$ or 14.5%

FACTORS AFFECTING THE WACC



WEIGHTED MARGINAL COST OF CAPITAL

- It is the **cost** associated with **obtaining additional capital for a company**.
- It represents the **increase** in the **cost of capital** when a company raises additional funds.

OPTIMAL CAPITAL STRUCTURE

Optimal capital structure is referred to as the **perfect mix of debt and equity financing** that helps in **maximising the value of a company** in the market while at the same time **minimises its cost of capital**.