

## **CAPITAL STRUCTURE AND COST OF CAPITAL AND WORKING CAPITAL MANAGEMENT.**

### **CAPITAL STRUCTURE.**

Capital structure refers to the mix of debt and equity that a firm uses to finance its operations and growth. It represents the composition of a company's funding sources, which typically include debt financing (such as loans and bonds) and equity financing (such as common and preferred stock). The choice of capital structure is crucial as it influences a firm's financial stability, cost of capital, and overall value.

### **FACTORS THAT DETERMINE CAPITAL STRUCTURE IN COMPANIES.**

Several factors influence a company's capital structure decision, and these include internal and external considerations.

#### **⇒ The Existing Level of Leverage.**

This is shown by the debt-to-equity ratio also known as Capital gearing. Firms with already high level of leverage are likely to raise additional funds through equity than debt and vice versa. Since debt financing has fixed financing charges payable annually, firms normally institute a manageable borrowing limit and when the gearing is close to the borrowing limit, firms will choose to issue equity rather than debt.

#### **⇒ Sales or Cash Flow Stability.**

Firms with unstable cash flows normally prefer to raise funds through equity but those whose sales are stable can easily meet the fixed financing obligations associated with debt and therefore can raise additional funds from debt financing. However, firms that lack stability in their cash flows will prefer to raise additional funds from equity providers.

#### **⇒ The Growth Stage.**

Young and growing firms prefer to use internally generated funds or internal equity since they may not have sufficient assets to use as collateral to secure debt financing. Well established and stable firms are likely to generate additional funds through borrowing due to the availability of collateral and tested credit worthiness.

#### **⇒ Desire for Control.**

When existing shareholders desire to maintain control of the firm, debt financing will be preferred since issuance of more shares leads to dilution in ownership and control of the firm. However, when existing shareholders do not necessarily desire to maintain control of the firm, external equity may be proffered in financing.

#### **⇒ Floatation or Transaction Costs.**

Whenever securities are issued, firm are expected to incur brokerage costs and other related fees. These increase the cost of raising funds through equity and therefore firms are likely to finance their operations using debt in case it still has borrowing capacity. They may however choose to use more of equity when transaction cost is considered to be lower.

#### **⇒ Preference for Financial Flexibility.**

Where management prefers to have financial flexibility, it will use more of equity funds in its operations to debt financing. Restrictive loan agreements normally limit this flexibility in terms of the extent of investments to consider, acquisition of additional debt finances or even on dividend payment.

⇒ **Accessibility to Capital Market.**

When Capital Markets are vibrant and accessible by the firm, there is a high likelihood of such a firm to use more of equity in its operations but where capital market is depressed with limited activities, the firm may opt to use more of debt financing.

⇒ **Bankruptcy Costs.**

A Firm that is facing bankruptcy (Financial Distress) is likely to source for additional financing using equity rather than from borrowings. Such a firm will be targeting to reduce its debt equity ratio by issuing additional equity shares.

⇒ **Cost of Funds.**

Where cost of debt is considered to be lower than cost of equity, the firm may choose to raise funds through debt but where the debt sources lead to an overall increase in cost of capital, the firm may prefer to use equity sources of funds.

**Evaluation of financial models related to the capital structure decision.**

**1. Relevance Theory of Capital Structure.**

The Relevance Theory of Capital Structure, also known as the Traditional Approach, argues that a firm's capital structure affects its cost of capital and overall market value. It suggests that by carefully balancing debt and equity, a company can achieve an optimal capital structure, minimizing its Weighted Average Cost of Capital (WACC) and maximizing firm value. This theory is based on the idea that debt financing is cheaper than equity due to the tax-deductibility of interest expenses, which lowers the firm's taxable income and, in turn, reduces the overall cost of capital. As a result, introducing a moderate level of debt can lead to a higher firm valuation compared to relying solely on equity financing. However, the theory also acknowledges that excessive debt increases financial risk and bankruptcy costs, which can eventually outweigh the benefits of debt financing. As debt levels rise beyond a certain point, lenders demand higher interest rates, and shareholders require higher returns due to increased risk exposure. This leads to a U-shaped WACC curve, where the cost of capital first declines with moderate debt usage but later rises due to financial distress. The optimal capital structure is achieved at the point where WACC is at its lowest, ensuring the highest possible firm value. This theory directly contradicts Modigliani and Miller's (MM) Irrelevance Theory, which states that capital structure has no impact on firm value in a perfect market.

**2. Irrelevance Theory of Capital Structure.**

The Irrelevance Theory of Capital Structure, proposed by Modigliani and Miller (MM) in 1958, argues that in a perfect market (without taxes, bankruptcy costs, or asymmetric information), a firm's capital structure has no impact on its value. According to MM's Proposition I, the market value of a company is determined solely by its operating income and risk, rather than the way it is financed (debt or equity). This implies that whether a firm finances its operations with 100% equity, 100% debt, or a mix of both, its total value remains unchanged. Investors, in a perfect capital market, can create their own "homemade leverage" by borrowing or investing on their own, making the firm's financing choices irrelevant. However, in real-world conditions, capital markets are not perfect, and MM later revised their theory (with taxes) to

acknowledge the impact of the tax shield on debt, making debt financing more attractive. Despite this, the core idea remains that firms cannot increase their value just by altering their capital structure. Instead, value creation depends on the company's investment decisions and profitability, not on whether it finances through debt or equity. This theory challenges the Traditional Approach by suggesting there is no optimal capital structure, and firms should focus more on operational efficiency rather than financing choices.

### 3. The Pecking Order Theory.

The Pecking Order Theory of Capital Structure, proposed by Myers and Majluf (1984), suggests that firms follow a **hierarchy** in financing decisions, preferring internal financing (retained earnings) **over** external financing (debt and equity issuance). This theory assumes that managers have more information about the firm's value and future prospects than external investors, leading to information asymmetry. Firms prefer to use *retained earnings* first because it does not require external scrutiny or signal financial weakness. If internal funds are insufficient, firms opt for *debt financing*, as issuing new equity might signal to investors that the company is overvalued, causing stock prices to drop. Consequently, *equity issuance* is considered a **last resort**. The Pecking Order Theory challenges the idea of an optimal capital structure, emphasizing that firms' financing choices are influenced more by information asymmetry and financing costs rather than a target debt-to-equity ratio.

### 4. The Agency Cost Theory of Capital Structure.

The Agency Cost Theory of Capital Structure, developed by Jensen and Meckling (1976), explains how conflicts of interest between managers, shareholders, and debt holders influence a firm's financing decisions. The theory suggests that when managers (agents) do not fully own the company, they may act in their own interests rather than maximizing shareholder value, leading to agency costs. These costs arise from managerial opportunism, such as excessive spending or inefficient investment decisions. Debt financing can help reduce agency costs by imposing discipline on managers, as they must generate sufficient cash flow to meet debt obligations. However, excessive debt can also create conflicts between shareholders and debt holders, as shareholders may push for riskier investments that benefit them at the lenders' expense. Therefore, an optimal capital structure balances debt and equity to minimize agency costs while ensuring efficient management and value creation.

## THE CAPITAL STRUCTURE DEBATE.

The Capital Structure Debate centers around the Traditional Theory and Modigliani-Miller (MM) Theory, with differing views on whether a firm's mix of debt and equity affects its value. The Traditional Approach argues that an **optimal capital structure exists**, where a moderate level of debt reduces the Weighted Average Cost of Capital (WACC) due to the tax benefits of debt, thus maximizing firm value. In contrast, the Modigliani-Miller Proposition (without taxes) asserts that capital structure is irrelevant in a perfect market, as investors can replicate leverage independently. However, in real-world conditions, factors such as corporate taxes,

bankruptcy costs, financial distress, and agency problems make capital structure decisions significant. MM later revised their model (with taxes) to acknowledge that debt financing can create value through tax shields, but excessive debt increases bankruptcy risks. As a result, firms must carefully balance the benefits of debt (tax savings) against its risks (financial distress), leading to the practical application of the Traditional View in real-world financial management.

## **EQUITY CAPITAL AND CAPITAL GEARING.**

### **Equity capital.**

Equity capital refers to the funds raised by a company from its owners or shareholders in exchange for an ownership stake. It represents the residual interest in a company's assets after deducting liabilities. Equity capital can come from various sources, including common shares, preferred shares, retained earnings, and share premiums.

### **Capital Gearing.**

Capital gearing refers to the proportion of a company's financing that comes from debt relative to equity. A firm is said to have high gearing if it has a significant level of debt compared to equity, whereas low gearing means the company relies more on equity financing. High gearing can be advantageous because debt is cheaper than equity due to tax-deductible interest expenses. However, it also increases the firm's fixed financial obligations, making it riskier, especially in times of economic downturns. On the other hand, a low-g geared company has lower financial risk but may face higher capital costs, as equity investors typically demand higher returns than debt holders. The optimal level of gearing depends on factors like industry norms, economic conditions, and the company's risk tolerance.

### **Relationship Between Gearing, Financial Risk, and Return on Equity.**

Capital gearing directly influences financial risk and return on equity (ROE). Higher gearing amplifies financial risk, as a firm must generate sufficient earnings to cover interest payments, increasing the likelihood of financial distress in times of low profitability. However, it can also enhance returns for shareholders through financial leverage. If a company earns a higher return on its investments than the cost of debt, ROE increases, benefiting shareholders. Conversely, if returns are lower than the cost of debt, shareholder value declines due to higher interest burdens. In contrast, low gearing reduces financial risk but limits the potential for higher shareholder returns, as the company does not benefit from debt-related tax shields and leverage effects. Therefore, firms must carefully balance gearing levels to optimize financial stability and shareholder value.

### **Financial Risk vs. Business Risk.**

### **Financial risk and its relation to capital structure decisions.**

Financial risk refers to the potential for a company to face difficulties in meeting its debt obligations, including interest payments and principal repayments. It arises primarily from high levels of debt financing (high gearing), as companies with more debt must generate sufficient earnings to cover fixed financial costs. If a firm fails to meet these obligations, it may face financial distress, increased borrowing costs, or even bankruptcy. Financial risk is a key concern for creditors, investors, and management, as it affects a company's **creditworthiness**, stock price volatility, and overall financial stability. Unlike business risk, which is related to operational factors, financial risk is directly linked to a company's financing decisions, making capital structure management crucial.

Capital structure decisions play a critical role in managing financial risk, as firms must carefully balance debt and equity to maintain financial stability. While debt financing provides tax advantages and enhances return on equity (ROE) through leverage, excessive debt increases financial risk by amplifying interest burden and default risk. Companies with stable cash flows and strong profitability can afford higher debt levels, while those with volatile earnings may opt for lower gearing to reduce financial risk. Ultimately, an optimal capital structure is one that maximizes shareholder value while keeping financial risk **at** manageable levels, ensuring long-term sustainability and growth.

### **Business risk and the role of fixed costs in operations.**

Business risk refers to the uncertainty in a company's earnings due to factors related to its operations, market conditions, competition, and economic environment. Unlike financial risk, which is linked to financing choices, business risk arises from fluctuations in sales, production costs, demand, and external economic factors. Companies in industries with high market volatility, regulatory constraints, or intense competition often face greater business risk. Additionally, firms with high fixed costs in their operations are more exposed to business risk because they must generate sufficient revenue to cover these costs, regardless of fluctuations in demand.

The role of fixed costs in business risk is significant, as higher fixed costs lead to greater earnings volatility and higher operating leverage. Firms with high fixed costs (e.g., manufacturing companies with expensive machinery or retail chains with large rental expenses) must maintain strong sales levels to remain profitable. When revenue declines, these costs remain unchanged, leading to sharp declines in profits. Conversely, companies with lower fixed costs (e.g., service-based firms) have greater flexibility to adjust expenses during downturns, reducing business risk. Therefore, managing the proportion of fixed to variable costs is essential for companies to balance profitability and risk exposure in their capital structure and operational decisions.

## **COST OF CAPITAL.**

### **Definition.**

Cost of capital is the minimum rate of return a firm is expected to generate to be able to pay its investors and other fund providers.

## Classification of Cost of Capital.

Cost of capital maybe classified as.

- Specific vs Overall cost of capital
- Historical vs Weighted Average Marginal Cost of Capital.

### ⇒ Specific Cost of Capital.

Specific Cost of Capital refers to the cost of individual source of funds used to finance a business operation e.g. debt, preference shares, retained earnings, equity.

### ⇒ Overall Cost of Capital or Weighted Average cost of Capital.

Overall Cost of Capital or Weighted Average Cost of Capital refers to the average cost of all sources of funds that a firm uses in financing its operations.

### ⇒ Historical Cost of Capital.

Historical Cost of Capital refers to the weighted average cost of the existing capital structure that a firm has and in use.

### ⇒ Weighted Average Marginal Cost of Capital.

Weighted Average Marginal Cost of Capital is the weighted average cost of additional capital that a firm intends to raise for future financing.

## Computation of Specific Cost of Capital.

### 1. Specific Cost of Debt.

Debt financing can be in terms of term (Bank) loans and or financial instruments such as bonds and debentures.

#### Formula; - Term Loan.

$$K_d = r(1 - t)$$

Where.       $K_d$  – Cost of debt  
                  $r$  – Interest Rate  
                  $t$  – Tax Rate

### Bonds and Debenture.

Bonds and Debentures can be either irredeemable or redeemable.

#### Irredeemable Bonds and Debenture.

##### Formula;

$$K_d = \frac{Int}{P_o} \times (1 - t)$$

Where;       $K_d$  – Cost of Debt  
                  $P_o$  – Market Price  
                  $Int$  – Interest (Rate \* Face Value)  
                  $T$  – Tax rate

### Redeemable Bonds and Debenture.

Redeemable Bonds and Debentures are debt instruments issued by corporations to raise funds from the public expected to mature after a specific period of time. The holders are entitled to both periodic interest payments and Principal repayment.

$$K_d = \frac{Int(1 - t) + \frac{1}{n}(Mv - P_o)}{\frac{1}{2}(Mv + P_o)}$$

**Where;**

Kd	Cost of Debt
Int	Interest Payments (Interest rate * face value)
n	Maturity Period
Mv	Maturity Value / Redeemable Value
Po	Market Price
t	Tax Rate

**2. Specific Cost of Preference Shares.**

Preference shares are hybrid instruments with features of both debt and equity. Preference shares can be either irredeemable or redeemable.

**Cost of Irredeemable Preference Shares.**

**Formula,**

$$K_p = \frac{Div_p}{P_o}$$

Where,  $K_p$  – Cost of Preference Shares  
 $Div_p$  – Annual Dividend Payment.  
 $P_o$  – Current Market Price.

**Cost of Redeemable Preference Shares.**

$$K_d = \frac{Div_p + \frac{1}{n}(Mv - P_o)}{\frac{1}{2}(Mv + P_o)}$$

**Where;**

$K_p$	Cost of Preference Shares
$Div_p$	Annual Dividend Payment (Dividend Rate * Face Value)
n	Maturity Period
Mv	Maturity Value/Redeemable Value
$P_o$	Current Market Price

**3. Specific Cost of Ordinary Share Capital or Equity.**

Ordinary share capital does not have a maturity period and the holders are the owners of the firm and are entitled to dividends.

**Ordinary Shares that are not yet paid attract floatation costs.**

**Formula;**

$$k_e = \frac{Div_1}{P_o - f_c} + g$$

Where;  $K_e$  – Cost of ordinary Shares or equity  
 $P_o$  – Current Market Value of Shares.  
 $Div_1$  – Expected future dividend  
g – Dividend Growth rate.  
 $F_c$  – Floatation Costs

**Ordinary Shares that are already paid do not attract floatation costs.**

$$k_e = \frac{Div_1}{P_o} + g$$

Where a Company has just declared or paid dividend, then you must include the ex-dividend price to determine the next dividend.

$$k_e = \frac{Div_0(1 + g)}{P_o} + g$$

#### 4. Specific Cost of Retained Earnings or Reserves.

Retained earnings refers to reserves or non-distributed internally generated funds from operations.

Formula;

$$K_{re} = \frac{Div_1}{P_0} + g$$

Where:  $K_{re}$  – Cost of Retained Earnings or reserves.  
 $Div_1$  – Expected future dividends  
 $P_0$  – Current Market Value of Shares.  
 $g$  – Growth Rate

#### Weighted Average Cost of Capital or Overall Cost of Capital.

This is the required rate of return on the entire pool of funds deployed by the business. The following steps can be followed,

- Determine the specific cost of capital for the individual sources of funds.
- Determine the proportion of each source of funds.

$$Prop = \frac{\text{Specific Source of funds}}{\text{total Capital}}$$

- Multiply the specific cost of capital for each source of finance with their respective proportion to get the weighted cost of capital for each source.
- Aggregate or sum up the individual weighted cost of capital for each source to get the weighted average cost of capital or overall cost pf capital or the required rate of return.

Sources	SCOC (a)	Proportion (b)	WCOC (a x b)
Bank Loan	$K_d$	$P_d$	$K_d \times P_d$
Bonds / Debentures	$K_d$	$P_{b,d}$	$K_d \times P_{b,d}$
Ordinary Shares	$K_e$	$P_e$	$K_e \times P_e$
Preference Shares	$K_p$	$P_p$	$K_p \times P_p$
Retained Earnings	$K_{re}$	$P_{re}$	$K_{re} \times P_{re}$
<b>Weighted Average Cost of Capital (WACC)</b>			<b>Summation</b>

### Example.

Eron Ltd uses the following Capital Structure in financing its current operations.

Sources	Ugx, "000"
Ordinary Shares (80,000 in number)	640,000
Retained Earnings	160,000
10% Irredeemable Preference Shares @ Ugx 100,000	200,000
14% Debenture (Irredeemable) @ Ugx 30,000	150,000
22% Bank Loan	50,000
<b>Total</b>	<b>1,200,000</b>

The firm intends to raise additional capital amounting to 800,000,000/= in the same proportion and the following additional information is given. The ordinary shares are trading at Ugx. 11,000 each and its dividend is expected to grow at a rate of 5% perpetually. Dividends is to be paid at 20% but issue costs per share is at UGX1,000. The current trading price per debenture is UGX25,000 while the company also intends to issue additional preference shares at UGX120,000 per share and corporation tax of 40% is chargeable.

**Required:** Determine the Weighted Average Cost of New Capital Structure and advise on a strategic funding scale of preference.

### Example 2.

Xavi holdings is currently using the following source of funds in its operations;

Source of funds	Amount
12.5% Bonds @ 20,000	600,000,000
12.5% Irredeemable Preference Shares	200,000,000
Ordinary Shares	800,000,000
Reserves	400,000,000
Total Capital	2,000,000,000

### Additional Information.

The bonds were issued as a 5 year redeemable instrument and currently trading at a market rate of UGX22,000 per bond. The preference shares are in denominations of UGX.10,000 and issued at par with a dividend rate of 12.5%. Ordinary Shares carry a face value of UGX8,000 per share and the company recently paid dividend at UGX1,200 per share and it is estimated to grow at 6% per annum. The shares are currently trading for UGX10,000 in the market with a floatation cost of 2% of the market price. The business is in a 30% tax bracket.

**Required:** Determine the Overall Cost of Capital for Xavi Holdings.

### **Dividend Policy vs. Internal Investment.**

Companies face a critical decision between paying dividends to shareholders and retaining earnings for internal investment. Dividend policy determines how much profit is distributed to shareholders in the form of dividends, while internal investment refers to reinvesting earnings into business expansion, research and development, or debt reduction. A firm's choice between these two options depends on factors such as its growth prospects, financial health, and shareholder expectations. Companies in high-growth industries often prefer to reinvest profits to fuel expansion, while mature companies with stable cash flows are more likely to distribute dividends to attract and retain investors.

### **Reinvestment vs. Dividend Payout Considerations.**

When deciding between reinvestment and dividend payout, companies must weigh the potential returns of reinvesting earnings against the benefits of rewarding shareholders. If a firm has profitable investment opportunities with high expected returns, reinvestment may create more value in the long term than distributing dividends. However, if growth opportunities are limited, paying dividends signals financial strength and stability, enhancing investor confidence. Some firms adopt a hybrid approach, maintaining a moderate dividend payout while retaining a portion of earnings for growth. Ultimately, the choice depends on the firm's strategic goals, industry conditions, and shareholder expectations.