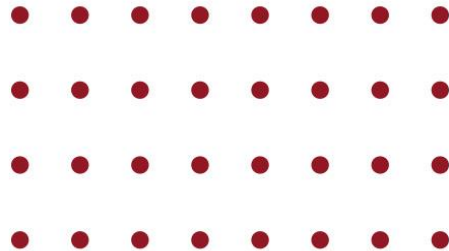


Class 12

UG3F14 Corporate Finance



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Class 12 Topics and Content

- Sources of Capital Funding - Equity and Debt Financing:

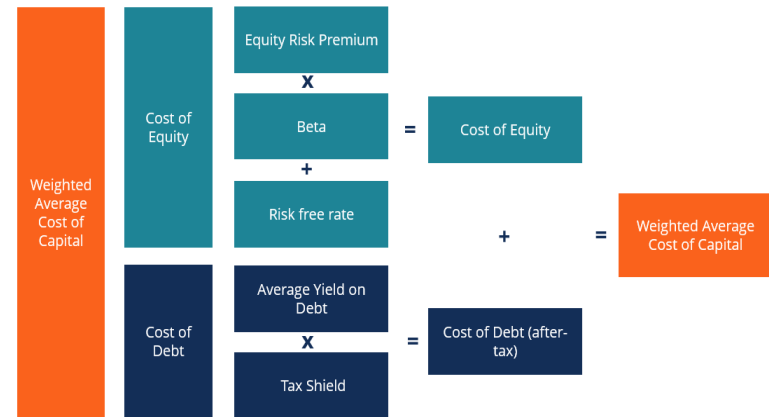
- The Cost of Capital: The concept of Weight Average Cost of Capital (WACC) as a tool for decision making
- The Importance of the Cost of Capital for Business Financial Decisions

Class 12

- Sources of Capital Funding - Equity and Debt Financing:

➤ The Cost of Capital:

- ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making
 - The company cost of capital is the right discount rate only for investments that have the same risk as the company's overall business
 - Project can be finance by debt, equity or with a blend of both debt and equity
 - A firm's Weighted Average Cost of Capital (WACC) represents the blended cost of capital across all sources: common shares, preferred shares, or debt
 - The cost of each type of capital is weighted by its percentage of total capital



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- Sources of Capital Funding - Equity and Debt Financing:

➤ The Cost of Capital:

- ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making
 - The purpose of WACC is to determine the cost of each part of the company's capital structure based on the proportion of equity and debt - each component has a cost to the company.
 - If a firm uses debt and equity to finance its investments its pays R_d for its debt financing and R_e for its equity, the overall or average cost of its capital is a the weighted average:

$$\text{WACC} = (E/V \times R_e) + ((D/V \times R_d) \times (1 - T))$$

E = market value of the firm's equity

D = market value of the firm's debt

V = total value of capital (equity plus debt)

E/V = percentage of capital that is equity

D/V = percentage of capital that is debt

R_e = cost of equity (required rate of return)

R_d = cost of debt (yield to maturity on existing debt)

T = tax rate

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- Sources of Capital Funding - Equity and Debt Financing:

- The Cost of Capital:
 - ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making

WACC Calculation

Capital Structure

Debt to Total Capitalization	35.00%
Equity to Total Capitalization	65.00%
Debt / Equity	53.85%

} Capital Structure

Cost of Equity

Risk Free Rate	2.00%
Equity Risk Premium	4.00%
Levered Beta	1.35

Cost of Equity 7.40%

Cost of Debt

Cost of Debt	8.00%
Tax Rate	28.50%
After Tax Cost of Debt	5.72%

WACC

6.81%

→ Firm's Opportunity Cost

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➤ The Cost of Capital:

- ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making

Example: *Elul Corp* has a debt market value of \$40 million, and a stock has a market value of \$60 million (3 million outstanding shares of stock selling @\$20 /share). The firm pays a 5% coupon on its new debt, has a beta of 1.41, a corporate tax rate bracket of 34%, the risk premium on the market is 9.5%, and the US T-bill rate is 1%. *Elul's* WACC is:

1. Tax adjusted debt cost is $R_d 5\% \times (1 - .34) = 3.30\%$
2. Cost of equity capital $R_s = 1\% + (1.41 \times 9.5\%) = 14.40\%$
3. Market Value of *Elul* = \$40 million + \$60 million = \$100 million (40% debt and 60% equity)

$$WACC = (E/V \times R_e) + ((D/V \times R_d) \times (1 - T))$$

Components	MV (\$)	Weight	Cost of Capital	WACC
Debt	40,000,000	40%	3.30%	1.32%
Equity	60,000,000	60%	14.40%	8.64%
	100,000,000	100%		9.96%

$$R_{wacc} = 9.96\%$$

Elul must pay its investors an average of \$0.0996 in return for every \$1 in extra funding

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- The Cost of Capital:
 - ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making
 - *R_{wacc}*:
 - Values projects - the overall expected return the firm must earn on its existing assets to maintain its values
 - Value overall businesses by using as the discount rate in PV calculations
 - Reflects the risk and the capital structure of the firm's existing assets
 - Is the appropriate discount rate for the firm or for a project that is a replica of the firm
 - Taxes is an important consideration for the cost of capital of bonds

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- Sources of Capital Funding - Equity and Debt Financing:

- The Cost of Capital: The Importance of the Cost of Capital for Business Decisions
 - ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making
 - The weighted average cost of capital is the rate that a company is expected to pay on average to all its security holders to finance its assets
 - Tests if a return on investment can exceed or meet an asset, project, or company's cost of invested capital
 - The Weighted Average Cost of Capital serves as the discount rate for calculating the Net Present Value (NPV) of a business
 - It represents the firm's opportunity cost - used to evaluate investment opportunities

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- Sources of Capital Funding - Equity and Debt Financing:

- The Cost of Capital: The Importance of the Cost of Capital for Business Decisions
 - ✓ The concept of Weight Average Cost of Capital (WACC) as a tool for decision making
 - The weighted average cost of capital is used as a hurdle rate for evaluating mergers and acquisitions (M&A), and for financial modeling of internal investments
 - Serves as a guideline for corporate actions for example if the investment opportunity Internal Rate of Return (IRR) < WACC, the business should buy back its own shares or pay out a dividend instead of investing in the project
 - Management uses this ratio to decide whether the company should use debt or equity to finance new purchases

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- The weighted average cost of capital (WACC) is a financial ratio that calculates a company's cost of financing and acquiring assets by comparing the debt and equity structure of the business
- It measures the weight of debt and the true cost of borrowing money or raising funds through equity to finance new capital purchases and expansions based on the company's current level of debt and equity structure
- Management typically uses this ratio to decide whether the company should use debt or equity to finance new purchases
- This ratio is very comprehensive because it averages all sources of capital; including long-term debt, common stock, preferred stock, and bonds; to measure an average cost of borrowing funds

