Dr.SNS RAJALAKSHMI COLLEGE OF ARTS AND SCIENCE
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Coimbatore- 49

DEPARTMENT OF MATHEMATICS

21UCR304: BUSINESS CALCULUS AND FINANCIAL COMPUTATION

Capital Cost & Capital Budgeting

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What is Cost of Capital?

- Cost of capital is the minimum return required by investors
- It is the cost of raising funds for a business
- Used as a discount rate in investment decisions

- Cost of Debt
- Cost of Equity
- Cost of Preference Shares
- Retained Earnings

- Interest paid on borrowed funds
- Adjusted for tax benefit

$$K_d = \frac{I(1-T)}{NP}$$

Where:

- I = Interest
- T = Tax rate
- NP = Net proceeds

Cost of Equity

- Return required by equity shareholders

$$K_e = \frac{D}{P_0} + g$$

Where:

- D = Dividend
- P_0 = Market price
- g = Growth rate

Weighted Average Cost of Capital (WACC)

- Overall cost of capital combining all sources

$$WACC = \frac{E}{V}K_e + \frac{D}{V}K_d(1 - T)$$

Where:

- E = Equity
- D = Debt
- V = Total capital

What is Capital Budgeting?

- Process of evaluating long-term investment projects
- Involves large capital expenditure
- Focuses on future cash flows
- Maximize shareholder wealth
- Select profitable projects
- Efficient allocation of resources

Payback Period Method, NPV Method & IRR Method

- Time required to recover initial investment

$$Payback\ Period = \frac{Initial\ Investment}{Annual\ Cash\ Inflow}$$

- Measures profitability in terms of present value

$$NPV = \sum_{t=1}^{n} \frac{C_t}{(1+r)^t} - C_0$$

- Discount rate where NPV = 0

$$0 = \sum_{t=1}^{n} \frac{C_t}{(1+IRR)^t} - C_0$$

THANK YOU