Meaning

Capital budgeting is about deciding whether a project or investment (like building a new factory, launching a product, or buying machinery) is financially viable. It focuses on long-term decisions that affect the firm's future profitability and growth.

Importance

- Helps firms allocate scarce financial resources wisely.
- Ensures projects chosen will maximize shareholder wealth.
- Reduces risk by evaluating future cash flows before committing funds.
- Provides a structured way to compare different investment opportunities.

Techniques Mentioned

TRADITIONAL METHOD:

- **Accounting Rate of Return (ARR):** Measures profitability based on accounting information rather than cash flows.
- **Payback Method:** Calculates how quickly the initial investment can be recovered.

DISCOUNTED CASH FLOW TECHNIQUE :

- **Net Present Value (NPV):** Discounts future cash flows to present value and compares them to the initial investment.
- **Net Terminal Value (NTV):** Focuses on the value of cash flows at the end of the project.
- **Internal Rate of Return (IRR):** The discount rate at which NPV becomes zero; shows expected rate of return.
- **Profitability Index (PI):** Ratio of present value of cash inflows to initial investment; helps rank projects.

1. Accounting Rate of Return (ARR)

- **Idea:** Uses accounting profit (not cash flow) to measure return.
- **Example:** Investment = ₹100,000 Average annual accounting profit = ₹20,000 ARR = (20,000 ÷ 100,000) × 100 = **20%**

2. Payback Period

- **Idea:** Time taken to recover the initial investment.
- **Example:** Investment = ₹100,000 Annual cash inflow = ₹25,000 Payback = 100,000 ÷ 25,000 = **4 years**

3. Net Present Value (NPV)

- **Idea:** Present value of cash inflows minus investment.
- **Example:** Investment = ₹100,000 Cash inflows = ₹40,000 per year for 3 years Discount rate = 10% PV inflows ≈ ₹99,600 NPV = 99,600 – 100,000 = **–₹400 (not viable)**

4. Net Terminal Value (NTV)

- **Idea:** Future value of cash inflows compounded to project end, compared with investment.
- **Example:** Investment = ₹100,000 Cash inflows = ₹30,000 annually for 4 years Compounded at 10% → FV ≈ ₹139,000 NTV = 139,000 – 100,000 = **₹39,000**

5. Internal Rate of Return (IRR)

- **Idea:** Discount rate at which NPV = 0.
- **Example:** Investment = ₹100,000 Cash inflows = ₹25,000 annually for 6 years IRR ≈ **12%** (solved using trial-and-error or financial calculator)

Profitability Index (PI)

- **Idea:** Ratio of PV inflows to investment.
- **Example:** PV inflows = ₹120,000 Investment = ₹100,000 ,PI = 120,000 ÷ 100,000 = **1.2 (profitable)**

Key Takeaway

- **ARR & Payback** → Simple, but ignore time value of money.
- **NPV, IRR, PI** → More advanced, account for time value, widely used in practice.
- **NTV** → Less common, but useful when focusing on future value.