Chapter8 preview

1. Terms Explanation

Capital Budgeting

Capital budgeting is the process of analyzing investment opportunities and deciding which ones to accept. Firms forecast revenues, costs, and cash flows to evaluate a project's NPV (Net Present Value), and they accept projects with a positive NPV.

Depreciation

A yearly deduction a firm makes from the value of its fixed assets (excluding land), reflecting wear and tear. It reduces taxable income via the depreciation tax shield, which increases cash flow.

Opportunity Costs

The value that could have been derived from an asset's best alternative use. For example, if office space used in a project could have been rented out, that foregone rental income is an opportunity cost.

Cannibalization

When a new product reduces sales of a firm's existing products. This indirect effect (a type of project externality) should be factored into the analysis of incremental earnings.

Sunk Costs

An unrecoverable cost that has already been incurred and should not be considered in future decisions. For example, previously spent R&D costs or fixed overheads that won't change based on the project decision.

Free Cash Flow (FCF)

The cash available from a project after accounting for operating costs, capital expenditures, and changes in working capital. It's calculated as:

$$\text{Free Cash Flow} = (\text{Revenues} - \text{Costs}) \times (1 - \tau_c) - \text{CapEx} - \Delta NWC + \tau_c \times \text{Depreciation}$$

Where t_c is the corporate tax rate.

Tax Loss Carryforwards / Carrybacks

These allow firms to apply current period losses to past or future taxable income, thereby reducing taxes. Carryforwards apply to future years, while carrybacks apply to previous years.

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2. What is the Project's Break-Even Point?

The break-even point is the value of a project parameter (e.g., sales volume, price, cost) at which the NPV becomes zero. It tells you the threshold at which a project neither gains nor loses value for the firm. It's used in break-even analysis to evaluate how sensitive a project's viability is to changes in assumptions like demand or price.