AFP LEARN

Financial Planning & Analysis

FINANCIAL ACUMEN:
BUDGETING SERIES

Capital Budgeting

COURSE LENGTH

Two 2-Hour Virtual Sessions or
One Half-Day In Person

DESCRIPTION

Capital budgeting is a process for evaluating and ranking the investment opportunities of a firm. Capital budgeting is a bottom-up approach that includes project identification, estimating cash flows, quantifying risk and determining if the proposed project adds value to the firm. Successful firms develop a capital budgeting methodology applicable to all levels of the firm, from analyst to CFO.

This course covers the basics of capital budgeting that all business professionals must understand to successfully navigate the complexities of capital expenditures and investment decision-making. Course topics include terminology, time value of money, introductory valuation tools, pro-forma cash flow statement development and analysis presentation.

LEARNING OBJECTIVES

- Understand the impact of capital budgeting on firm value
- Understand why Albert Einstein said the time value of money is the "most important equation in the history of mankind"
- Learn to perform modern capital budgeting techniques in Excel
- Learn to build pro-forma cash flow statements in Excel
- Learn to prepare a report with assumptions, analyses and recommendations

AGENDA

The course is laid out "menu" style. Course topics 1-5 must go together, topics 6-8 are highly recommended, and topics 9-11 are optional.

- What is capital budgeting?
  - Capital expenditures vs operating expenses
  - Project identification and rationing
  - The capital budgeting systems approach
- Time value of money
  - Net present value (NPV)
  - Economic equivalence
  - Mapping NPV from analyst to CFO
- Cost of capital
  - Linking cost of capital to value-added decision making
  - Calculating the discount rate

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- The capital budgeter's decision tool box
  - Payback period and why not to use it
  - Discounted payback period
  - NPV as a function of borrowing costs
  - Internal rate of return and why not to use it
  - Modified internal rate of return
- Pro-forma cash flow statement (PFCFS) development
  - Cash flow identification
  - Depreciable assets and macrs
  - Calculating applicable taxes
  - Basic PFCFS development
  - PFCFS with working capital investments
  - PFCFS with borrowed funds
  - PFCFS with multiple assets
  - PFCFS for cost-only projects
- Deterministic capital budgeting in an uncertain world
  - Discounted break-even analysis of a PFCFS
  - Sensitivity analysis of a PFCFS
  - Scenario analysis of a PFCFS
- The analyst's deliverable (0.5 Hours)
  - Analyst report format
  - Executive summary, assumptions, analysis, recommendations
- Comprehensive case study
  - Extensive problem statement
  - Pfcfs statement development
  - Tool box: discounted payback period, NPV, NPV profile, MIRR, sensitivity and scenario analysis
  - Analyst report
- Optional: introduction to stochastic capital budgeting in an uncertain world
  - Determining the probability of project success
  - NPV distribution using random variables of a pfcfs
  - NPV distribution using monte-carlo simulation of a PFCFS
- Optional: mean-variance portfolio project selection
  - Optional: introduction to real options capital budgeting
  - Managerial discussion of the real options approach
  - Valuing the option to defer an investment
  - Valuing licenses and leases
  - Valuing sequential investment scenarios

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Capital Budgeting

— Optional: mini-case studies
  - Annual equivalent (AE) analysis
  - NPV on a per hour basis
  - Make vs buy decision on a per unit basis
  - Break even point per unit of equipment use
  - NPV of motors and electric use
  - Investment decision in large equipment
  - Comparing mutually exclusive investment opportunities
  - Lease or buy decisions
  - Leasing vs retained earnings vs borrowed funds NPV analysis
  - Evaluating projects with unequal lives
  - Replacement analysis
  - Economic service life of equipment
  - Finite replacement cycles
  - Replacement analysis over long time horizons
  - Make vs buy decisions

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