

F-202 Building and Analyzing Financial Models II



Course Description

The development and analysis of financial models are an essential component of any PPP/project finance transaction. Financial models are necessary to evaluate the economics of a project, for negotiations among stakeholders and are a key component of the final documentation.

In this IP3 course we focus exclusively on the basic techniques of building, interpreting, and analyzing a financial model using Microsoft Excel®.

While the development and analysis of project finance models are often delegated to external financial advisors, it is important that certain selected public officials involved in a transaction not only have an understanding of how financial models work, but also to have the capability to manipulate the financial model.

The objective of this course is twofold. The first is to provide the participant with the tools to build a financial model and effectively manage third-party financial advisors. The second is to provide a knowledge base for the level III financial modeling course, which is geared toward officials responsible for developing financial models for project financing.

Become a Certified Project Finance Specialist

IP3's Project Finance Specialist Certification program provides a core body of knowledge in project finance, creating a world-class standard in project finance.

Certification requirements include 24 CEUs and successful completion of a Project Finance Specialist exam.

Learning Objectives

Through successful completion of this course, participants will be able to:

- Describe the purpose and scope of project financial models (i.e., what a financial model is and why project stakeholders need it)
- Identify the financial model's key outputs and calculate them
- Construct a semi-flexible financial model inclusive of key model building blocks
- Design a funding sheet with debt financing
- Construct pro-forma financial statements
- Describe how the building blocks in the financial model are linked to each other
- Manage assumptions to effect results
- Design, set-up, and effectively label spreadsheets for project financings

Who Will Benefit

- National, regional, and local government officials responsible for infrastructure financial modeling
- Contract officers and regulatory commissioners
- Financial analysts from PPP or privatization units
- Public servants, utility managers, executives, and financial experts
- Audit or project managers
- Staff of bilateral and multilateral international organizations

IP3 is an accredited provider of Continuing Education Units (CEUs) as sponsored by the International Association for Continuing Education and Training (IACET).



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Capital Projects, Project Finance and the Role of Financial Models

- PPP rationale and objectives
- PPP contract structuring options
- Understanding the unique investment requirements of infrastructure and public services
- Options for financing infrastructure investments: Sovereign, corporate and project finance
- Roles of financial modeling and financial analysis in PPPs

Flags and Counters

- “Time value” of money calculations using Microsoft Excel®
- Future valuation (FV) of a current investment
- Present valuation (PV) of future cash flows
- Net present valuation (NPV)
- Internal rate of return (IRR)
- Debt payments
- Interest payments
- Principal payments

Modeling Project Operations: Calculating Project Returns

- Accounting and income analysis vs. financial analysis and cash flows
- Income analysis for infrastructure investments: Non-cash expenses, depreciation and net income
- Calculating cash flow analysis: Debt service coverage ratios (DSCRs), net cash flows and IRRs on equity
- Understanding key investment ratios and financial indicators

Modeling Tax and Depreciation

- The need for credit enhancements to make economic and social infrastructure PPPs “bankable”
- PPP credit enhancement techniques and case examples
- Viability gap funding (VGF) and model PPP documents

Introducing Debt Financing into the Model: Waterfall

- Designing financial spreadsheet models for PPP project financing
- Selecting key financial outputs for governments, end-users, investors, lenders, labor and other stakeholders
- Structuring financial models inputs, calculations, and outputs
- Labeling, formatting, programming, and presentation conventions for robust, flexible, and clear PPP financial models
- Using PPP financial models to test risks and support project decision-making

Modeling Functions and Key Concepts

- Financial modeling fundamentals
- Objectives of financial modeling
- Excel® basic and advanced features
- Overview of key concepts
- Cash waterfall
- Modeling working capital, and depreciation and taxes
- Debt financing and repayment schedules
- Debt service coverage ratios
- Financial analysis

Introducing Debt Financing and Debt Repayment Schedule

- Capital project ownership and funding
- Debt financing
- Debt amortization
- Project analysis
- Sensitivity and leverage analyses
- Project risk and contractual mitigants
- World Bank and OPIC guarantees

Financial Analysis: Leverage, Sensitivities, DSCRs, LLCR, Terminal Value

Steps of Project Analysis; Risk Allocation in Project Finance

- Analysis using financial model
- Analysis of financial model
- Sensitivity analysis
- Project finance risk allocation
- Ways to enhance project structure

