Project Analysis, Economic Evaluation and Feasibility Studies

Introduction

In an uncertain world how do governments, institutions and corporations make decisions regarding the allocation of scarce resources between competing investment opportunities? How do market participants evaluate the merits of new investment proposals presented to them? How do they balance the risks and returns? The answer is through the use of project analysis and economic evaluation methods and tools such as feasibility studies.

This course covers the practices and procedures involved in project analysis and economic evaluation and the preparation of feasibility studies which can be applied to a
wide range of industries. In particular, the course will focus on the application of key principles to the analysis of projects, preparation of economic evaluations and feasibility studies. The course will also provide participants with a guide to the analysis and understanding of feasibility studies prepared by others.

The course will focus on developing a framework for the identification, estimation, allocation and mitigation of the key risk areas in any project analysis or feasibility study. The development of this framework will involve consideration of not only the economic viability of a project but also the financial, legal and technical risks inherent in the transaction/project structure.

Who should attend?

The course is aimed at providing general information for a wide range of participants. As a primary focus will be on risks and their allocation, the course would be of particular interest to those involved in new projects and their financing such as corporations, investors (both private and institutional), bankers and other professionals involved in these projects such as lawyers, accountants, engineers, etc.

BENEFITS:

The course aims to provide participants with an understanding of the issues involved in project analysis and economic evaluation including the preparation of feasibility studies which can then be applied in the participants’ own industry.

Application and understanding of key principles will be the focus of the course and no specific prior knowledge is required.

OBJECTIVES:

To provide an understanding of the theory underlying project analysis and economic evaluation methodology and the issues which arise in practice when applying these methods. In addition, this course will examine the process of risk identification and analysis together with the concepts involved in the preparation of project analyses and feasibility studies. On completion participants should be able to better understand the process and procedures involved in the economic evaluation of investment opportunities and be able to critically review and assess project analyses and feasibility studies prepared by others as well as prepare their own simplified versions.

Daily Outline:
Day 1

General Overview
- Introduction to course
- Uses of feasibility studies, project analyses and economic evaluations
- Limitations of feasibility studies, project analyses and economic evaluations
- Key components of feasibility studies, project analyses and economic evaluations

Project background
- Understanding the rationale for the Project
- Project objectives and main features
- Project size, site and location
- Economic and industrial policies supporting the project

Market and Capacity
- Understanding the market
- Demand forecasting
- Project sales and revenues
- Production program and costs
- Plant capacity and utilisation

Day 2

Overview of Economic Analysis
- Purpose of economic analysis
- The economic setting
- The process of economic analysis

Evaluation Principles and Methods
- Risk identification
- Principles of risk allocation/mitigation
- Importance to market participants
- Assessing viability in general

Day 3

Financial Evaluation
- Time value of money
- Discounting and discount rates
- Shadow prices
- Pay-back period
- Simple rate of return
- Break-even analysis

Review of Cash Flow Valuation Principles
Analysis of Project Viability
- Project criteria for single projects
- Cost–benefit ratio (BCR)
- Net present value (NPV)
- Internal rate of return (IRR)

**Day 4**

**Project Alternatives**

- Is the project the best alternative?
- How to choose between project alternatives?

**Examples / case studies**

**Project Criteria and a Shortage of Investment Funds**

**Extensions to the Standard DCF Model**

- Residual Income / EVA approach to valuation
- Adjusted Present Value (APV) and Flow to Equity (FTE) approach

**Day 5**

**Assessment Techniques**

**Sensitivity Analysis**

**Technical Feasibility**

**Economic Viability**

**Project Viability and Transaction Structuring**

- Risk assessment
- Risk allocation matrix
- Case studies
- Nature of security interests
- Legal framework
- Ownership & financing structure

**Day 6**

**Preparing a Feasibility Study**

- Estimating project cashflows
- Preparing a financial model
- Evaluating proposed financing structure
- Case studies

**Strategic Flexibility with the Use of Real Options**

- Review of option pricing methodology
- Framework for identifying and valuing strategic options
- Practical issues in applying real options
Day 7

**Project Financing**
- Sources of financing
- Public policy and regulation of financing
- Financing institutions
- Required financial statements

**Impact of Financing on Feasibility**
- Impact of financing structure on project proposals
- Impact of debt servicing on project proposals

**Case Studies**
- What happens when the estimates of project cashflows vary?
- Reworking the financial model
- Re-evaluating the Project
- Can it ever be viable and what is the value?
- Restructuring the transaction — winners and losers

Day 8

**Processes and Systems to Manage Capital Expenditure**
- Testing the effectiveness of capital expenditure process
- Designing a project evaluation process
- Generating alternatives — a key requirement for a good decision making

**Summary of course**
- Uses of feasibility studies and economic evaluations
- Limitations of feasibility studies and economic evaluations
- Key components of feasibility studies and economic evaluations
- Review of evaluation principles and methods
- Review of assessment techniques