

Sculpting and Optimisation for PFI and PPP deals

Course Objectives

This course offers an intensive program of theory and practice, covering methods of optimisation appropriate to PPP and PFI projects.

The course considers the general theory and purpose behind optimisation, looking at targets and constraints. Delegates are guided through practical sessions in which they develop a set of illustrative models to include optimisation for each of the following situations, after a detailed explanation of the theory behind each case;

- Sculpting of debt service to meet cover factor targets for given revenues and funding assumptions
- Optimised funding sources calculation to meet cover factor and IRR targets with given revenue and debt:equity assumptions
- Optimised revenue and sculpted debt service to meet cover factor and IRR targets with with given funding assumptions
- Optimised debt:equity ratio plus sculpted debt service to achieve cover factor and IRR targets with fixed revenues
- Perfect optimisation, as applicable in "not for profit" PPPs, with optimisation of debt:equity ratio, debt repayment profile and revenues.

Course Structure

The three day course is a mixture of theory and practical work.

The course agenda will be split over the three days on a flexible basis This allows timings to follow the progress of the group, and to respond to their specific questions and interests.

Required Skills

The practical aspects of the course are based around models built according to the general principals detailed in Penelope Lynch's core modelling courses, and in her Euromoney workbook "Financial Modelling for Project Finance". Delegates will be assumed to be familiar with the structure of such models and the methods used to build and develop them, as well as the simple re-calc macro utilised to solve iterative calculations.

Agenda

Introduction

Brief review of BOT, PFI, PPP deals, and use of project finance models to provide bid figures

The search for tailored, sculpted and optimised solutions

Targets and Constraints

What will win the bid, what limits the possible solutions?

Examples

- *Equity returns what is cheapest? what is possible?*
- *revenue, how low can we go?*
- *debt:equity ratio, what gives best result, what limits the possibilities?*
- *sculpted debt service, meeting cover factors, maximising loan life*

Technical issues

- *circularity*
- *multiple solutions*
- *applying constraints*

Sculpting debt service to meet ADSCR targets

Constraining repayments by ADSCR targets without circularity utilising full loan life

back-ending repayments

- *using LLCR targets*
- *managing circularity issues*

review of illustrative models demonstrating the methods discussed

Practical Exercise One

Given a non-optimised project model, delegates will work under detailed guidance from the course director to model sculpting of senior debt service to meet ADSCR targets. Delegates will then further develop their models to optionally include back-ending of senior debt repayment.

Scenarios and Sensitivities

Establishing optimised base case scenarios

Extracting key optimised results for project agreements

eg.

- *repayment profiles*
- *sculpted deposit targets*
- *revenue figure at specified value date*

'Fixing' calculated optimised values to run sensitivity cases

Optimising funding amounts

What sources of funds are cheapest?

What constrains their use?

How can construction period subsidy best help a bid?

Calculating the maximum acceptable values of debt and equity for LLCR and IRR targets

Deriving funding drawdown schedules from maximum acceptable debt and equity values

Iterative elements of the calculation

Finding the required values without circular code

- *identifying key iterative values*
- *reducing risk of oscillation or repeated cycling during iteration*

review of illustrative models demonstrating the methods discussed

Practical Exercise Two

Using a copy of the model developed in practical one, delegates will work under detailed guidance from the course director to restrict debt and equity drawings to meet LLCR and IRR requirements, and to schedule subsidy drawings to fund remaining construction period costs

Optimised Revenues

What constrains minimum revenue figures?

Calculating costs-matched revenues for each period

- *including equity returns*
- *dealing with tax*
- *dealing with circularity and avoiding circular code*

Calculating an inflating fixed annual revenue figure

- *targetting IRR*
- *targetting LLCR*
- *meeting ADSCR*
- *smoothing irregular costs*

review of illustrative models demonstrating the methods discussed

Practical Exercise Three

Using a copy of the model developed in practical one, delegates will work under detailed guidance from the course director to expand the model to calculate the lowest inflating fixed annual revenue figure which meets ADSCR, IRR and period by period cash flow requirements, using fixed funding assumptions and sculpted debt service.

Optimising the Debt:Equity ratio

What is achieved by changing the debt:equity ratio?

- *with fixed revenues*
- *with adjustable revenues*

What constrains its value?

How can we find the optimum?

Modelling the optimisation

review of illustrative models demonstrating the methods discussed

Practical Exercise Four

Using a copy of the model developed in practical two, delegates will work under detailed guidance from the course director to expand the model to calculate the optimum debt:equity ratio with fixed revenues and sculpted debt service, within the constraints of lender and investor requirements.

Not-for-profit projects

What are 'not-for-profit' (NFP) deals?

How are NFP bids evaluated?

What are our targets for a competitive bid?

What is the optimum debt:equity ratio when revenues are also optimised?

How do we manage the calculation when everything is moving?

Practical Exercise Four

Using a copy of the model developed in practical three, delegates will work under detailed guidance from the course director to expand the model to calculate the optimum debt:sub-debt ratio. Subject to available time, delegates will also back-end the senior debt repayments whilst observing lenders repayment, ADSCR and LLCR targets and constraints.

Summary & Discussion