

# Financial Modelling

## Training Guide

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We can provide you with tailored financial modelling and project finance training solutions. The suggested course outlines can form the basis to develop and structure tailored training courses to meet your needs.

# Our Courses

Foundation in Project  
Finance Modelling

Advanced Modelling  
for Project Finance

Add On:

P3/PPP and  
Infrastructure Projects

Add On:

Renewable Energy  
Project Modelling



**Karina Tam**  
Head of Training

Our courses are set in a small workshop environment and are highly interactive. You will learn to code formulas from scratch and build a cash flow model from the bottom up.

# Foundation in Project Finance Modelling

This 2-day course is designed for participants who would like to build, review or analyse project finance models. Participants will create a discounted cash flow model from scratch using best practice methodology and along the way, practice powerful Excel techniques and shortcuts.



The models you learn to build on this course are robust, flexible and easy to use.

## Financial models in the context of project finance

- Discuss the role of the financial model in a project finance transaction
- Understand what differentiates a “good” model from a “bad” one
- Apply industry accepted best practice principles
- Discuss the 3Fs – foundation, formatting, formula
- Learn tips and shortcuts to improve efficiency and reduce errors

## Model development

- Plan the model layout, structure, flow and periodicity/timing
- Design a user-friendly input sheet and create drop down lists, data validation and custom formatting
- Understand the phases of a typical project and create flexible timing and flags
- Write clear and concise formulas using binary flags, switches, and range names. Discuss the pros and cons of these techniques
- Learn the common Excel functions and understand when to use them

## Capital expenditure

- Discuss how to layout construction costs in a transparent and flexible way
- Add flexible contingency cost calculation

## Operations phase

- Consider the cash flow drivers and calculate production and revenue
- Calculate fixed and variable operating costs
- Understand real vs nominal values and use escalation index

## Funding the project

- Understand the structure of the cash flow waterfall
- Discuss typical funding options and drawdown approaches seen in typical transactions
- Discuss different debt repayment options and add a switch to allow users to evaluate the repayment methods
- Incorporate costs of debt including upfront fees and commitment fees

## Ratios and returns

- Calculate equity and project returns
- Perform returns (NPV and IRR) analysis and understand their drivers and pitfalls to different calculation methods
- Analyse key project finance ratios including DSCR and discuss the requirements from lenders

## Scenario and sensitivity analysis

- Perform sensitivity analysis and build a powerful scenario manager
- Create data tables to perform project analysis
- Introduction to optimising the funding mix using data tables

## Reviewing and troubleshooting (optional time permitting)

- Add checks to the model to reduce the risk of errors
- Where to start reviewing a model and what to look out for
- How to navigate around a model and interrogate formulas
- Model circularity - What is it? Why is it not accepted How to eliminate it?
- Discuss types of Excel errors and how to fix them
- Use a delta worksheet to analyse changes and spot potential errors

## Charting and presentation (optional time permitting)

- Pick up quick charting tips and pointers
- Create dynamic and flexible charts

# Advanced Modelling for Project Finance

This 2-day course is designed for participants who would like to learn advanced analytical techniques used in the project finance industry.

Participants will build upon the Foundation course model and add additional funding sources and covenants. Basic VBA coding will be written from scratch to debt size and prevent model circularities.



The best practice techniques and tips garnered from the course has helped take financial modelling within our organisation to another level.

## Add additional scenarios and sensitivities

- Review commonly used Excel formulas for modelling
- Add a construction delay scenario and review the scenario manager

## Optimise the funding mix

- Calculate the optimal debt capacity and optimise the capital structure
- Introduction to the VBA environment
- Write basic VBA coding from scratch

## Add lender's required modelling features

- Build a Debt Service Reserve Account using advanced Excel formulas
- Discuss the use of other reserve accounts such as maintenance reserve account
- Understand how circularities can be eliminated Review commonly used project finance ratios Calculate cash sweeps and lock-ups

## Different funding sources and interest rate swaps

- Consider the modelling of multiple funding sources and hierarchy
- Discuss the use of shareholder loan and its impact on shareholder return
- Add shareholder loan to the model, and calculate rolled up interest and repayments

## Tax, depreciation and financial statements

- Grouping asset classes and using a streamlined approach to straight-line depreciation
- Calculate tax losses and carry-forward tax losses
- Consider the impact of thin capitalisation rules and apply a typical calculation to the deductibility of the shareholder loan interest
- Building integrated financial statements and ensuring the balance sheet balances

## Refinancing

- Consider typical refinancing scenarios and discuss case studies of recent transactions
- Add refinancing scenarios to the model incorporating refinancing fees

## Multi-asset and portfolio model techniques

- Discuss the different approaches to multi-asset and portfolio modelling
- Learn Excel functions which are useful when creating multi-asset models
- Use Excel-based case studies to illustrate and apply these modelling techniques

## Operational and business models (optional time permitting)

- Consider different model timing including actuals period and business planning period
- Use Excel-based case studies to illustrate the addition of actual data to a forecast model

# P3/PPP And Infrastructure Projects And Renewable Energy Projects

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In addition to our popular 2-day Foundation and Advanced courses, we can provide you with tailored financial modelling and project finance training solutions with industry specific add on modules.

## P3/PPP and Infrastructure Projects

This one-day course add on is a highly interactive session where participants can further their modelling skills with an infrastructure relevant case study.

- Consider pre-operational revenues and milestone payments
- Discuss different funding sources including government funding contributions and subsidies
- Model availability payments and incorporate lifecycle costs

## Renewable energy Projects

This one-day course add on will boost the renewable energy professional with relevant and industry specific modelling skills.

- Consider pre-operational revenues and ramp up phase
- Discuss the modelling and funding requirements of different renewable technologies
- Understand how to model different pricing regimes including offtake agreements, merchant revenue and contract for difference (CfD)
- Understand how to interpret a technical report and incorporate relevant extracts into the model including seasonality profiles, yields and degradation sensitivity factors

# Contacts

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