

# PPP FINANCIAL MODELLING MASTER CLASS

Training Course outline

CBN International Training Institute, Abuja | July 16-19, 2019



Infrastructure  
Concession  
Regulatory  
Commission





## Overview

This course aims to provide participants with an in-depth understanding of how to build a complete and robust financial model from the scratch. Calculations cover revenues, operating and maintenance cost, capital expenditures, depreciation, debt and equity financing and taxation, leading to the build-up of integrated financial statements for the entity in question. Developed models are expected to be dynamic in nature, with the ability to run different scenarios and adjust the timing of key events.

During the course, participants will also gain insights into mechanisms for designing and tailoring inputs and outputs of financial models to suit different needs, sectors, country specific requirements, and end users. They will also learn how to interpret the results and run sensitivities, as well as perform some degree of testing to reduce the incidence of modelling errors.

The course will utilise tried and tested global best practice modelling approaches. The techniques covered will support the development

of models that are flexible, robust, transparent, user-friendly in nature, and adaptable to the needs of various stakeholders – investors, sponsors, developers, bankers, and regulators.

With the use of a real-life case study, participants will have hands-on experience on how to go from a blank Excel workbook to a successfully executed PPP financial model. Using global best practice modelling methodology, participants will gain a deep understanding of funding structures, debt mechanics, risk metrics, cash flow waterfalls and essential scenario analysis.

**Duration:** Four (4) days

**Class size:** The recommended class size is a maximum of 50 participants. This is so that each participant can obtain sufficient one-on-one attention and support from the course instructors.

**Fees:** **₹350,000.00**



## Format

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The course will be highly interactive, comprising of a mix of theory, group-discussions, instructor-led demonstrations and Excel-based exercises for participants to undertake.

Each module will be enriched by using additional materials in form of financial models, sample contracts, online tools and video clips to analyse real world case studies. Ample time will be dedicated to hands-on financial analysis and real-life case studies, to make participants understand the structuring of projects, and how to drive the sensitivities of key output ratios by varying input parameters. Participants will also be provided with a comprehensive slide pack, an illustrations booklet covering key Excel formulae, instructions to modelling exercises and exercise solution files. These will be used during the course and will serve as valuable reference material following the course should participants wish to refresh their skills at a later date. Additional homework exercises can also be provided upon request

## Key Objectives

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In this program, participants will receive intensive practical guidance in advanced techniques in financial modelling aligned to the Public Private Partnership (PPP) process. Participants will review the key stages and elements of the Public Private Partnership (PPP) contract management process and identify a range of project modelling techniques for risk and contingency strategy formulation, foreign exchange risk minimisation and modelling techniques.

In particular they will learn how to calculate the various IRRs, NPVs, loan cover ratios and other key criteria used to determine the viability of a project. They will also learn to appreciate those areas where the model they have built may have limitations, and how to tweak such models when applied to more complex projects, or projects in different sectors with peculiar requirements. They will also learn how to build flexibility into the model by simply inserting the following parameters: Capital cost, Revenues, Operating costs, Construction schedule, Project life, Start date, Accounting dates, Exchange rates, Inflation rates etc.

Specifically, the training course is structured to enable participants to;

- i. Develop effective PPP Financial modelling skill; appreciation of the tools, techniques, methodologies and uses
- ii. Appreciate the key success factors/fundamentals in developing a robust financial model
- iii. Master transparent and flexible modelling techniques for debt analysis, covenants, financial statements and investment metrics, with a focus on professionally styled analysis for communication
- iv. Understand better, how to tailor the input and outputs of the model to suit different needs, sectors, country, end users, and other specific requirements, as well as an understanding of how to interpret the results of a financial model
- v. Master the mechanisms for reducing the incidence of modelling errors
- vi. Develop an understanding of the systematic process of utilising financial model outputs for valuations, evaluation, deal structuring, and negotiations

- Take their existing model build skills to a more advanced level

Participants are thus expected to include:

- Government Officials & Senior Officers from National Line Ministries, State Infrastructure Agencies, or Local Governments
- Officials & Senior Officers from PPP Units, Regulators, and Investment Agencies responsible for infrastructure development
- Project Developers involved with PPP project development/financing
- PPP Transaction Advisors, Bankers & Legal Consultants
- Staff of Bilateral and International Development Organizations

## Prerequisites

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*The following are the prerequisites to fully maximise the trainings;*

- Availability of laptops equipped with Microsoft Excel.
- Delegates should also have working knowledge of spreadsheet. The course is directed at intermediate and skilled users of Excel but it would not be suitable for those with no experience of spreadsheet. For example, participants should have the ability to navigate easily around Excel's menu options
- Working knowledge of financial statements and rudimentary accounting
- A basic understanding of leading approaches towards financial modelling
- Some experience of working on project finance models

## Target audience

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The course is targeted at individuals who are looking to achieve the following:

- Refresh their financial modelling skills
- Gain an understanding of leading approaches towards financial modelling, in order to build models that are robust and user-friendly in nature
- Be able to use existing models more competently, interpret the results and have greater comfort over the integrity and accuracy of the model's calculations
- Extend their toolkit for modelling more complex areas of a project finance model in an efficient and flexible manner



## Training Course Module

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While the focus on the Master Class will be on building, stress testing, and interpretation of Financial Models, other related but critical areas such as its application will be touched on. The following are the major topics to be covered over the three-day period.

### **Day 1: An Introduction to Financial Modelling – Foundation and Structure**

#### *Part 1 - Modelling Basics*

- Introduction to the project finance environment, the key stakeholders involved, and the different types of financial models used
- A review of basic accounting and an overview of the various Financial Statements
- Relevance of financial Models, and the key risk associated to financial modelling
- Financial Modelling tools and applications
- Leading approaches to model building, the benefits they bring and the importance of formatting
- Critical success factors in financial modelling

#### *Part 2 - Financial Model Design*

- The overall model development process and items to cover during the design phase
- Typical layout, structure and flow of a suitable financial model;
- Adopting a template approach to achieve consistency between model worksheets
- Using 'control accounts' as the key building blocks for the calculations of a mode

#### *Part 3 - Addressing the Timing Challenge in Financial Modelling*

- ✓ Single vs. multiple model timelines
- ✓ Constructing timing flags to indicate the occurrence of project phases and allow for timing flexibility
- ✓ Using percentage flags to pro-rate items where events occur mid period
- ✓ Overlaying calculated forecasts with actual data or hardcoded forecast information

### **Day 2: Building Financial Models I – Inputs and Calculations**

#### *Part 4 - Assumptions, sensitivities and scenario cases*

- Alternative layouts for model inputs and scenarios
- Using range names and data validation to increase model robustness and improve the user interface

#### *Part 5 - Fixed Assets and Depreciation*

- Different ways of modelling capital expenditure relating to different asset classes, including project and capitalised costs.
- Depreciation methodologies including a more streamlined method for straight-line depreciation where multiple asset acquisitions take place across the model timeline
- Accounting considerations for service concession arrangements

#### *Part 6 – Operations Modelling*

- Generating forecasts for revenues, operating and maintenance costs and working capital
- Calculating indexation factors based on different cash flow timing assumptions and converting real cash flows to nominal
- Overview of availability type transactions and what to consider when modelling associated payment streams
- Modelling sources and uses of funds, calculating the funding requirement and different drawdown approaches to service funding needs
- Costs related to debt financing such as interest, commitment fees and arrangement fees
- Different debt repayment methods including annuity, straight-line, bullet, balloon and sculpted
- Modelling multiple tranches of debt according to their position in the cash waterfall hierarchy
- Common types of reserve accounts and their uses

- Equity basics as well as alternatives to equity such as bridge loans and shareholder loans
- Constraining factors on dividend distributions such as accounting restrictions and lockups imposed by lender

#### *Part 7 – Dealing with Taxation*

- Different approaches for modelling corporate tax with potential adjustments for capital allowances, disallowable costs and loss carry-forwards
- Other taxes such as consumption taxes, alternative minimum taxes and withholding tax

### **Day 3 – Building Financial Models II: Outputs, Interpretations, and Use**

#### *Part 8 – Financial Statements, other schedules and graphs*

- The importance of integrated financial statements and how to set them up
- IRR and NPV calculations, using both project and equity cash flows, calculated from first principles and using Excel's in-built functions
- Other key output measures such as lending and profitability ratios and industry KPIs, including tailoring these towards the end users
- Graphing tips

#### *Part 9 – Interpreting and using the model*

- Interpreting the model's outputs and monitoring key transaction measures as well as other KPIs and covenants
- Creating dashboards, hyperlinks and contents pages for easier use and navigation around the model
- Performing stress testing on a model based on designated sensitivities and in-built scenario cases



- Identifying optimisation objectives and running optimising processes within a financial model
- Using financial models to negotiating term sheet and financial agreement

#### *Part 10 – Model Review and Testing*

- Use of a checks sheet to automatically detect and quickly identify potential modelling errors
- Using a toolkit of model review techniques including delta views and flex testing
- Common modelling errors including tips on how to spot them

### **Day 4: Building Financial Model III: Addressing Possible Issues and Document Protection**

#### *Part 1: Dealing with Circularities*

- Why circular references are bad
- Typical circularities seen in project finance models
- Methods for circumventing circularities, including implementing 'copy-paste' macros
- A brief introduction to VBA for Excel and how to incorporate a 'copy-paste' macro into a model

#### *Part 2: Document Management*

- Workbook protection, printing, and version control

**NB:** At various stages of the course, delegates will be supplied various set of exercises that will culminate in a fully developed model.

# Contact details

For further information about the course, please contact the following:

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