Introduction to Financial Modelling

Training course outline
Overview

This course aims to provide participants with a thorough understanding of how to build a robust financial model from start to finish. Calculations cover revenues, operating and maintenance costs, capital expenditure, depreciation, debt and equity financing and taxation, leading to the build-up of integrated financial statements for the entity in question. The model is dynamic in nature, with the ability to run different scenarios and adjust the timing of key events.

During the course, participants also gain an insight into how to tailor the outputs of the model to end users, interpret the results and run sensitivities, as well as perform some degree of testing to reduce the incidence of modelling errors.

The course utilises tried and tested modelling approaches adopted by EY practitioners worldwide. The techniques covered aim to produce models that are flexible, robust, transparent and user-friendly in nature.

**Duration:** two days

**Pre-course work:** none required

**Class size:** the recommended class size is a maximum of 12 participants. This is so that each participant can obtain sufficient one-on-one attention and support from the course instructor.
Format

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

Participants are 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

The course is designed to cover the following key objectives:

► Appreciate the difference between what makes a good model and a bad one
► Follow a logical, structured and disciplined approach towards model building
► Build a model (or significant parts of one) from start to finish
► Learn how to translate key financial and commercial aspects into Excel
► Understand better how to tailor the outputs of the model towards end users and interpret the results
► Improve knowledge of Excel functionality
► Learn ways to reduce the incidence of modelling errors

Target audience

The course is ideal for those 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 userfriendly 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

Prerequisites

Some prior knowledge and experience is assumed. 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
## Training modules

### Foundations

**Modelling basics**
- What financial models do and the risks associated with financial modelling
- Leading approaches to model building, the benefits they bring and the importance of formatting

**Structure**

**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 model

**Timing-related components**
- Constructing timing flags to indicate the occurrence of events 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

### Inputs

**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
- Creating one and two variable data tables to assess the potential impact of various assumptions on key output measures

### Calculations

**Fixed assets and depreciation**
- Different ways of modelling capital expenditure relating to different asset classes
- Depreciation methodologies including a more streamlined method for straight-line depreciation where multiple asset acquisitions take place across the model timeline

**Operations modelling**
- Generating forecasts for revenues, operating and maintenance costs and working capital
- Using indexation factors based on different cash flow timing assumptions to convert real cash flows to nominal

**Debt and equity financing**
- Modelling different drawdown approaches to service funding needs
- Costs related to debt financing such as interest, commitment fees and arrangement fees
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- Different debt repayment methods including annuity, straight-line, bullet and balloon repayments
- 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 lenders

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

Outputs

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-hand 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

Implementation and use

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

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

Other

Dealing with circularities
- Why circular references are bad
- Typical circularities seen in financial models
- Methods for circumventing circularities, including implementing ‘copy-paste’ macros

General house keeping
- Workbook protection, printing, version control and project management
Contact details

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

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