Advanced Project Finance Modelling with Sculpting and Circular Reference Resolution

Advanced Project Finance Modelling with sculpting and circular references has a focused outline where participants focus on complex financing and conceptual issues as well as tricky programming issues. The outline is intentionally short and focused.

Part 1: Circular references with copy and paste returns compared to using functions. Problems with functions in terms of complexity and how to fix the functions. Simple example with fees, function for resolving the IDC circularity function and function for solving the sculpting and taxes problem Demonstration of how function can provide benefits when models are used for bidding.

Part 2: Use of formulas (NPV of debt service = loan amount) combined with excel techniques to solve various sculpting problems beginning with no tax and no fee case and moving to more complex cases.

Part 3: Understand how the LLCR can be used to compute debt sculpting if there is a debt to capital constraint. Demonstrate the importance of long-tenor even with the possibility of re-financing and model the effect of re-financing with different project IRR and debt structuring assumptions.

Part 4: Model cash sweep with waterfall concepts and demonstrate the meaning of PLCR and DSCR with different interest rates and multiple debt trances that have different interest rates.

UNIQUE RESOURCES FOR FURTHER LEARNING AND RETAINING KNOWLEDGE

- An essential part of the course is the provision of vast materials that can be used to re-enforce the concepts discussed in the workshop and to allow participants to engage in further study. Materials include:
  - Many featured models in electric power that fully resolve circular references, rigorous structuring, customised scenario analysis and other features
  - Hundreds of Focused exercises highlighting a variety of advanced financial issues
  - Frameworks for unique presentation of data and risk analysis including Monte Carlo Simulation;
  - Methods for extracting crucial data for financial and energy analysis with transparent macros that automatically update information
  - Unique tools to convert PDF files, format spreadsheets and enhance efficiency
  - Collection of comprehensive case studies, financial articles, contracts and models

Part 5: Funding problem of IDC, fees and funded DSRA account along with EBL's. Demonstrate the effects of alternative funding with different construction delay and construction timing assumptions. Demonstrate how to incorporate a function in a relatively painless manner. Use the model to demonstrate the effects of EBL on equity IRR and on the amount of liquidated damages using different assumptions.

Part 6: Construction of effective scenario analysis in the context of structuring analysis to demonstrate the effect of alternative structuring parameters such as DSCR targets, debt tenures, credit spreads, debt to capital constraints and development fees. Develop the scenario analysis for effective presentation and use VBA rather than data tables. Use the scenario analysis to demonstrate the effects of alternative financing structures on the required bid in an IPP or PPP context.

Part 7: Construction of effective scenario analysis in the context of structuring analysis to demonstrate the effect of alternative structuring parameters such as DSCR targets, debt tenures, credit spreads, debt to capital constraints and development fees. Develop the scenario analysis for effective presentation and use VBA rather than data tables. Use the scenario analysis to demonstrate the effects of alternative financing structures on the required bid in an IPP or PPP context.

Part 8: Modelling of Balloon payment in sculpting context. Contrast balloon payment with mini-perm. Understand the circular reference that arises from the balloon payment. Also understand

re-financing, cash sweep and letter of credit issues associated with the balloon payment. Include a cash sweep account associated with the balloon payments.

Part 9: Include DSRA in the modelling analysis along with option to use a letter of credit instead of the DSRA. Understand how to incorporate letter of credit fees on the DSRA in sculpting. Demonstrate alternatives for the difficult circularity problem with interest income or letter of credit fees. Mode the pros and cons of a function relative to copy and paste macros.

Part 10. Address tax issues including tax loss carry forward and the treatment of shareholder loans. Model the effects of IDC on shareholder loan on the debt to capital constraint and on the debt sculpting if the shareholder loan allows tax deductions.

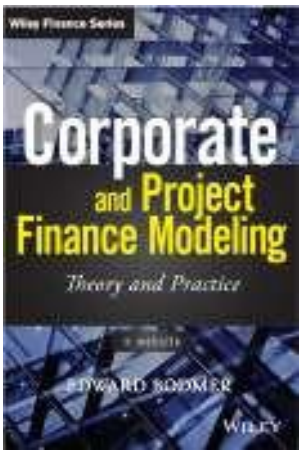
Part 11. Model alternative interest rate structures and different treatments of cash flow earned before the COD.

Construction of Balloon payment in sculpting context. Contrast balloon payment with mini-perm. Understand the circular reference that arises from the balloon payment. Also understand re-financing, cash sweep and letter of credit issues associated with the balloon payment.

TEACHING STYLE COVERING THEORY AND PRACTICE

- We have developed a unique teaching style whereby theory is covered well as practice. Teaching Approaches Include:
  - Having participants perform all the practical exercises rather than the instructor
  - Minimizing the use of power point slides and maximizing theoretical discussion behind each concept
  - Reserving time for group case studies to reinforce theory and practice
  - Providing resources for future learning and knowledge retention
  - Highly interactive and hands-on teaching style
  - Selection of case studies demonstrating potential errors in analysis and theory

Our Expert Faculty



Edward Bodmer provides financial and economic consulting services to a variety of clients, he teaches professional development courses in an assortment of modelling topics (project finance, M&A, and energy). He is passionate about teaching in Africa, South America, Asia and Europe. Many of the unique analytical concepts and modelling techniques he has developed have arisen from discussion with participants in his courses. Professor Bodmer has taught customized courses for MIT's Sloan Business School, Bank Paribas, Shell Oil, Society General, General Electric, HSBC, GDF Suez, Citibank, CIMB, Lind Lakers, HSBC, Saudi Aramco and many other energy and industrial clients. Bodmer's consulting activities include developing complex project finance, corporate and simulation models, providing expert testimony on financial and economic issues before energy regulatory agencies, and advisory services to support merger and acquisition projects.

Mr Bodmer has written a textbook titled ***Corporate and Project Finance Modelling, Theory***

and Practice published by Wiley Finance. The book introduces unique modelling techniques that address many complex issues that are not typically used by even the most experienced financial analysts. For example, it describes how to build user-defined functions to solve circular logic without cumbersome copy and paste macros; how to write function that derives the ratio of EV/EBITDA accounting for asset life, historical growth, taxes, return on investment, and cost of capital; and how to efficiently solve many project finance issues related to debt structuring. Bodmer is in the process of writing a second book that describes a series of valuation and analytical mistakes made in finance. This book uses many case studies from Harvard Business School that were thought to represent effective business strategies and later turned into valuation nightmares.

Over the course of his career Professor Bodmer has been involved in formulating significant government policy related to electricity deregulation; he has prepared models and analyses for many clients around the world; he has evaluated energy purchasing decisions for many corporations; and, he has provided advice on corporate strategy. Mr Bodmer's projects include development of a biomass plant, analysis and advisory work for purchase of electricity generation, distribution and transmission assets by the City of Chicago, formulation of rate policy for major metro systems and street lighting networks, advocacy testimony on behalf of low income consumers, risk analysis for toll roads, and evaluation of solar and wind projects. He has constructed many advisory analyses for project finance and merger and acquisition transactions.

Professor Bodmer was formerly Vice President at the First National Bank of Chicago where he directed analysis of energy loans and also created financial modelling techniques used in advisory projects. He received an MBA specializing in econometrics (with honours) from the University of Chicago and a BSc in Finance from the University of Illinois (with highest university honours). Mr Bodmer was born in Manchester, England, he lived in Switzerland as a child, and currently resides in Chicago. You can find more information on his website www.edbodmer.com.