2 DAY WORKSHOP

OVERVIEW

Forecasting, simulation, real options and optimization techniques are increasingly popular tools that provide Financial Analysts with analytic power well beyond the traditional toolset.

Through workshops, case examples and practical Risk Solver learning models, participants will actively learn and practice essential skills and techniques to obtain accurate estimates from subject matter experts, test & validate planning assumptions, leverage historical data in planning/estimating scenarios, assign a probability of realizing an objective, maximize benefits using optimization, etc.

This workshop is designed for both the beginner and advanced financial analyst and we will fully cover the A to Z of applying risk analysis techniques. – A must for executives, managers, consultants and analysts who can't afford to be wrong!

CONTENT (DAY 1)

Module 1 – Welcome to Risk Solver

- **Risk Solver Monte-Carlo simulation in corporate finance?**
    - o Challenges in corporate finance
    - o Understanding risk analysis key concepts and definitions
    - o Overview and history of Monte-Carlo Simulation
    - o Advantages and Disadvantages of simulation
    - o Workshop: What does 90% confidence mean?
    - o Workshop: Cost Estimation Model

- **The Modeling Process**
    - o Setting Objectives
    - o Properly scoping the need, building assumptions and establishing model constraints with Subject Matter Experts (Bottom-Up Estimating, The Delphi Method)
    - o Obtaining and using historical or published data
    - o Workshop: New Compensation Plan Model

Module 2 – Risk Management using Simulation

Using the DuPont Model, we are going to

- o Review of basic statistical concepts and definitions within Risk Solver, including: variance, common distributions, sensitivity analysis, etc.
- o Overview of RSP Interface, tools and functionalities including Optimization and Decion Trees

- **Model Building Basics (1hr)**
    - o Picking the right distributions and defining them in RSP
    - o Outputs - Identifying and defining what we want to analyze
    - o Fitting Probability Distribution using Historical Data
    - o Making sure your model behaves correctly using correlation
    - o Workshop: Portfolio Allocation Model

- **Running the model (1hr)**
    - o Optimizing the number of trials
    - o Establishing Confidence Intervals
    - o Visualizing Results and Charts (Sensitivity, Forecasts, Assumptions and Overlays)
    - o Generating Risk Solver Reports

- **Risk identification and Assessment using Risk Solver (1hr)**
    - o Interpreting Forecasts and Sensitivity Analysis

CONTENT (DAY 2)

- o Identifying Risks and Potential Mitigation Strategies

- o Model Calibration using Risk Management Mitigation Solutions

- o ROI Analysis using historical data to build ROI Scenarios and compare them using Overlay Charts (DuPont Model)

Module 3 – Financial Modeling

- **Communicating Results to the business (1hr)**
  - o What your boss Wants to Know: Incorporating key information from Risk Solver into presentations and reports
  - o Techniques to effectively and simply presenting your analysis
  - o Question handling
  - o Workshop: Presenting effectively to your boss

- **Time-Series Overview (1hr)**
  - o Modeling common time-series methods using historical data & expert opinion
  - o Aggregate Corrleation

- **Portfolio Management Optimization Techniques (9hrs):** With the help of several integrated financial models, this workshop will provide financial analysts with a complete understanding of why, where and how to apply spreadsheet forecasting, simulation, real options and optimization within their analyses.

  - o **Discounted Cash-Flow Analysis** using Simulation

  - o *Portfolio & Resource Allocation* Optimization: Allocate resources or budgets among various investments to maximize NPV or ROI or minimize risk or expense.

  - o **Modeling Efficient Frontier** Analysis to optimize risk against benefit for projects and investments. (Portfolio Allocation)

  - o **Portfolio Allocation with CVAR**

  - o **Introduction to an integrated DCF and valuation using Real Options**

  - o **Project Selection:** Use OptQuest to pick the best projects based on Organizational Budget Constraints

BENEFITS

At the end of this 2 day workshop, participants will be able to:

- Understand and apply Monte-Carlo simulation and optimization in their day-to-day activities

- Make better and more informed decisions

- Quickly build effective models or customize existing ones with Risk Solver Platform

- Apply simple and effective Risk Management Techniques using Risk Solver Platform

- Pick and manage project more effectively

- Use historical data to forecast future revenues and how to use those forecasts to create better predictive Discounted Cash Flow (DCF) models

- Perform a DCF analysis and determine ROI on a specific project using Monte Carlo simulation to identify and evaluate risk and uncertainty in your model

- Apply real options techniques to accurately account for the impact of positive uncertainty in estimating your project's value

- Use a portfolio optimization model where the efficient allocation of resources is analyzed to improve the quality of your business decisions.