STOCHASTIC RISK MODELING & DECISION ANALYSIS VIA EXCEL + MODELISK

COURSE DESCRIPTION

Course Objectives

- Create object-oriented spreadsheet models that operationalize complex variables in business and enterprise
- Apply probabilistic distributions to assumptions and forecasts in spreadsheet models and forecasts
- Activate stochastic simulations in spreadsheet models and forecasts
- Optimize (maximize or minimize) projected results in models and forecasts based on requirements and conditions in spreadsheet models
- Apply linear and non-linear forecasting methods (e.g., ARMA, ARCH, GARCH, EGARCH, and more) to time-series data in spreadsheet models
- Model correlation and dependence between bivariate and multivariate distributions using copulas in spreadsheets models and forecasts
- Learn about other resources available to support your requirements for stochastic modeling
- Reinforce your learning with hands-on practice on your laptop

Course Materials

Each learner receives a copy of “Risk Analysis: A Quantitative Guide” ($136 value) with 90-day user’s license (ask about upgrades) for ModelRisk (Vose) software for use on your personal computer.

Instructor

Dr William J McKibbin is a consulting financial modeler, risk analyst, and educator specializing in forecasting, simulation, optimization, statistics, programming, auditing, and presentation support. Dr McKibbin has been in professional practice serving companies in various capacities as consultant, advisor, and trainer since 1998.

Delivery

This workshop is delivered via hosted or onsite training.

Fees

$1,777.50 per attendee (regularly $2,370 before 25% discount)

Contact

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“William has a very thorough understanding of risk analysis modeling. He provides high quality training courses in risk analysis using our ModelRisk software, which I thoroughly recommend.”
--David Vose, Director, Vose Software
**Purpose**

Risk analysis skills are in demand in today's economy. The purpose of my training courses is to enable analysts, consultants, accountants, engineers, managers, and executives to build more effective and reliable risk analysis models using Excel (Microsoft) combined with best in class add-in applications.

**Modules**

Course modules are listed to the right and can be delivered sequentially or individually. Each module is a 3-hour block of instruction that builds expertise in the major components of quantitative risk analysis. The training is application focused on Excel (Microsoft), ModelRisk (Vose), and other tools. Completion of all six modules delivers to the learner a coherent and comprehensive program in quantitative risk analysis and spreadsheet modeling.

**Modes**

In addition to hosted events, training delivery can also be in client-hosted and web-hosted formats. Please visit our website or contact us directly so that we can discuss how best to meet your training needs.

**Next Steps**

Register now for your hosted training event using the convenient form found at the end of this flyer. Or, visit our website to sign-up online for a specific event. Additional details about the training will be sent to you following registration. Please send or fax your approved purchase order if used by your firm. Discounts for multiple attendees from the same organization available upon request. Thank you for registering for our training events in advance.

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**Modeling**
- Develop object-oriented spreadsheet models that operationalize complex variables in business and enterprise
  - Excel (Microsoft) + ModelRisk (Vose)
  - Live 3-hour training session (recommended for .3 CEUs)

**Distributions**
- Apply probabilistic distributions to assumptions and forecasts in spreadsheet models and forecasts
  - Excel (Microsoft) + ModelRisk (Vose)
  - Live 3-hour training session (recommended for .3 CEUs)

**Simulation**
- Activate stochastic (Monte Carlo) simulations in spreadsheet models and forecasts
  - Excel (Microsoft) + ModelRisk (Vose)
  - Live 3-hour training session (recommended for .3 CEUs)

**Optimization**
- Optimize (maximize or minimize) projected results in models and forecasts based on requirements and conditions in spreadsheet models
  - Excel (Microsoft) + ModelRisk (Vose)
  - Live 3-hour training session (recommended for .3 CEUs)

**Forecasting**
- Apply linear and non-linear forecasting methods (e.g., ARMA, ARCH, GARCH, EGARCH, and more) to time-series data in spreadsheet models
  - Excel (Microsoft) + ModelRisk (Vose)
  - Live 3-hour training session (recommended for .3 CEUs)

**Correlation**
- Model correlation and dependence between bivariate and multivariate distributions using copulas in spreadsheet models and forecasts
  - Excel (Microsoft) + ModelRisk (Vose)
  - Live 3-hour training session (recommended for .3 CEUs)

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“**The most advanced RISK MODELING SOFTWARE in the world!”**
ModelRisk

ModelRisk is the best-in-class spreadsheet-based software solution for professional standard quantitative risk analysis, forecasting, simulation, and optimization. Open database connectivity further extends the business intelligence capabilities of this integrated platform by enabling access to essentially any data warehousing system in use today.

Distributions

ModelRisk incorporates a truly complete range of distributions. Graphical interfaces, categorization by function, fitting to data and a detailed interactive guide on the theory and use of each distribution help ensure that you find the correct distribution for your problem. You can also create your own distribution using the Shaper tool.

Simulations

ModelRisk has a comprehensive range of tools to run Monte Carlo simulations within Excel. Results appear in a separate window that allows you to customize, save, and share a comprehensive range of graphical and statistical analyses.

Forecasting

ModelRisk has built-in tools for simulating time series, together with graphical interfaces and fitting to data to ensure that you understand and select the appropriate time series model. The custom time series tools also let you create your own expert-based forecasts.

Correlations

Modeling any correlated behavior between distributions is a critical component in risk analysis. ModelRisk allows the user to visualize and fit correlation structures to data through its copula tools. Through its unique approach to correlating variables, any number of distributions can be correlated. ModelRisk’s own data copula offers a powerful way to replicate any unusual correlation pattern.

Optimizations

ModelRisk Professional incorporates the world’s leading simulation optimizer from OptTek Systems. Targets, constraints, decision variables, and requirements are all defined with ModelRisk functions within the Excel spreadsheet. A graphical interface reports the optimizer’s progress and allows the user to insert optimal solutions back into the model with one mouse click.
Registration

Please register me for (see schedule online at [http://www.mckibbinusa.com/hosted.html]):

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<th>COURSE TITLE</th>
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NAME (Please print)

TITLE

ORGANIZATION (Please use full name)

DEPARTMENT

STREET ADDRESS

CITY          STATE     ZIP

BUSINESS TELEPHONE NUMBER   FAX NUMBER   E-MAIL ADDRESS

(For additional registrations, please make copies of this form)

Billing

☐ BILLING ADDRESS SAME AS ABOVE

BILLING NAME

STREET ADDRESS

CITY          STATE     ZIP

BILLING TELEPHONE NUMBER   FAX NUMBER   E-MAIL ADDRESS

Payment

☐ PURCHASE ORDER #______________________ (please attach copy)

☐ VISA  ☐ MASTERCARD  ☐ DISCOVER  ☐ AMERICAN EXPRESS

CARD #

EXPIRATION DATE: Month_____ Year_____

SIGNATURE

Complete Registration

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Thank you for registering in advance for your training event!