Risk Analysis Using Crystal Ball

Duration: 0 Days

What you will learn

Risk Analysis Using Crystal Ball will teach you the basics of Monte Carlo simulation with Crystal Ball, how to gain insights from simulation results, and the best ways to present your findings. This course was created in partnership with Dr. John M. Charnes, former professor at the University of Kansas School of Business. Starting with an overview of spreadsheet simulation, the course answers the question of why risk analysis is vital to the decision-making process, and how to use Crystal Ball to obtain and communicate your simulation results. The lesson units include software tips and application ideas, as well as periodic tests and exercises to help solidify the concepts. The course also contains four exercise models that help you to apply risk analysis to such areas as cost estimation, portfolio allocation, design analysis, and cash flow analysis.

You will need Crystal Ball 7 or later to run this course . The course has been developed using version 7 and the functions available in this version have been included.

Learn to:

Use Crystal Ball Assumptions, Decision Variables, and Forecasts

Understand basic probability and statistics concepts

Fit distributions to historical data, Correlate assumptions

Perform tornado and sensitivity analysis

Apply statistical controls to the simulation

Use a decision table, Interpret and present results

Audience

Business Analysts

End Users

Related Training

Required Prerequisites

Introductory understanding of Excel and competence with Windows operating systems

Suggested Prerequisites

Basic knowledge of probability and statistics

Course Objectives

Design simulation models of realistic situations

Select appropriate probability distributions as inputs

Use Crystal Ball to make better decisions

Apply basic statistical concepts to simulation outputs

Communicate CB results effectively

Course Topics

Welcome
Welcome
What is Crystal Ball
Who is Using Crystal Ball
Oracle Company Background
Course Objectives
How to Use This Course
Course System Requirements
Crystal Ball System Requirements

Getting Started
Getting Started
Learning Objectives
CB in Action
Setting up CB and this Course
How to Open the Example Models
Run and Reset Icons
Exercise 2.1
Solution to Exercise 2.1

Overview of Simulation
Overview of Simulation
Deterministic Models
Learning Objectives
Traditional Approaches for Handling Uncertainty
Sensitivity Charts Icon
Sensitivity Analysis
Run Preferences Icon
Simulation Strengths and Weaknesses

Understanding CB Forecasts
Understanding CB Forecasts
Learning Objectives
CB Toolbar Quiz
Forecast Window
Statistics View
Summary

Introduction to CB Assumptions
Introduction to CB Assumptions
Learning Objectives
Define Assumption Icon
Crystal Ball Distribution Gallery
Binomial Distribution

Controlling the Simulation
Learning Objectives
Run Preferences Dialog
Specifying Precision
Latin Hypercube vs. Monte Carlo Sampling
Speed Tab
Options Tab
Statistics Tab

Sensitivity and Tornado Analysis
Sensitivity and Tornado Analysis
Learning Objectives
Sensitivity and Tornado Charts
Sensitivity and Uncertainty
Understanding the Sensitivity Chart
Sensitivity Chart Views
Sensitivity as Contribution to Variance
Specify Input Variables

Decision Table Tool
Decision Table Tool
Decision Variables and the Decision Table Tool
Using the Decision Table Tool
Select One or Two Decisions
Decision Table Tool Output Worksheet
Decision Table Trend Chart
Decision Table Overlay Chart
Decision Table Forecast Charts

Presentation of Results
Presentation of Results
Learning Objectives
Overlay Chart Icon
Outline Charts
Choose Trend Charts Forecasts
Time-Series Plot
Creating a Report
Restoring a Crystal Ball Simulation