



## Value at Risk - Online

This course gives an introduction to the various statistical concepts including Value at Risk (VaR). It elaborates on the computation of Value at Risk (VaR) of various items and with the comparison of the four analytical techniques viz., gap, duration, simulation and value at risk.

This is an online self study course that can be globally accessed 24/7 from any internet enabled computer. Course access is for 91 days. Certificates with earned credits will be awarded for successful completion.

También, se ofrece este curso en Español. Llamada para más información.

## Targeted Audience

Risk managers and assistants, trading assistants, finance professionals, auditors and controllers.

## Advance Preparation

No advance preparation required.

## Prerequisites

Market Risk Basics and Intermediate - Online or equivalent level of knowledge

## Alumni Comments

*"The content of the course was very good. It will help me greatly in my career."*

## Follow-Up Courses

Market Risk Advanced- Online

Operational Risk Management - Online

Market Risk Intermediate - Online

Market Risk Basics - Online

**Level: Advanced**

**ceu Credits: 23**

**icb Credits: 23**

**icpas Credits: 9**

## **Detailed Outline**

### **Review of Statistical Concepts**

**This module gives an introduction to the various statistical concepts. It helps the user understand:**

- . The various statistical measures viz., measures of central tendency and measures of dispersion
- . The statistical relationship between the standard deviation and confidence intervals for normal distributions
- . The concept of correlation and volatility and the methods to calculate them

Duration: 1 hour

### **Value at Risk - I**

**This module gives an introduction to concept of Value at Risk (VaR). It helps the user understand:**

- . The concept of Value at Risk
- . The concept of trading and banking book
- . The various methodologies of estimating VaR and their strengths and weaknesses
- . The comparison between the strengths and limitations of VaR

Duration: 1.5 hours

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### **Value at Risk - II**

**This module elaborates on the computation of Value at Risk (VaR) of various items. It helps the user understand:**

- . The computation of VaR of foreign exchange spot, foreign exchange options positions, common shares/stocks and fixed income portfolio
- . The various applications of VaR

Duration: 2 hours

### **Application of Analytical Techniques**

**This module deals with the comparison of the four analytical techniques viz., gap, duration, simulation and value at risk. It helps the user understand:**

- . The framework of analytical techniques - gap, duration, simulation and value at risk

- . The concept and assumption under each technique
  - . The comparison and analysis of each of the techniques across various parameters
  - . The application of techniques with real life case studies
- Duration: 1 hour
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## **Regulatory Issues**

**This module deals with the regulatory issues involved with value at risk. It helps the user understand:**

- . How market risk can be regulated
- . The purpose of regulatory capital
- . The various approaches applied to capital charges

Duration: 1 hour

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## **VaR Models**

**This module explains various VaR models. It helps the user understand:**

- . The various methods to measure value at risk such as parametric, historical simulation and Monte Carlo simulation
- . The comparison among the various methods according to their characteristics, advantages and disadvantages
- . The process of value at risk implementation

Duration: 2 hours

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## **Stress Testing**

**This module deals with the concept of stress testing. It helps the user understand:**

- . The concept of stress testing as a complimentary tool to value at risk analysis
- . The creation of hypothetical and historical scenarios
- . The implementation of stress test scenarios into

## **Back Testing**

**This module deals with back testing. It helps the user understand:**

- . The technique of backtesting
  - . The different types of backtesting
- Duration: 1 hour

market risk modeling

. The growing use of stress testing to risk managers

Duration: 1.5 hours

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### **Risk Management Systems**

**This module gives an introduction to the risk management systems. It helps the user understand:**

- . The important steps involved in the choice of risk management software vendor
- . The main software solution vendors in the market; products they offer and their salient features

Duration: 2 hours

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### **Case Study - Orange County**

**This module deals with the Orange County case study analysis through commonly used market risk measures namely Duration and Value at Risk. It helps the user:**

- . Gain an insight into the Orange County case and comprehend the investment techniques which led to its disaster

Duration: 1 hour

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### **Case Study - Barings Bank**

**This module deals with Barings Bank case study and analyzes how with the application of VaR measurement methodology the crisis could have been avoided. It helps the user**

- . Understand the impact of the Kobe earthquake on Japanese equity and currency markets
- . Comprehend Nick Leeson's trading operations in Singapore International Monetary Exchange (SIMEX)
- . Understand how Kobe earthquake caused huge losses to Leeson's reported and unreported positions on SIMEX and OSE

Duration: 1 hour

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### **Case Study - Metallgesellschaft**

**This module deals with the background of Metallgesellschaft case study, the investment deals which led to the disaster and the strategies adopted by Metallgesellschaft. It also provides an analysis of what was amiss, & the lessons to be learnt from it.**

Duration: 1 hour

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## **Description of Advanced VaR Models**

**This module explains in detail the various advanced VaR models. It helps the user understand:**

- . The various emerging forms of VaR viz., Component VaR and Del VaR
- . The impact of individual trades on Total VaR
- . The advancements in Monte Carlo Simulation
- . The variance reduction techniques employed for Monte Carlo Simulation

Duration: 1 hour

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## **Advanced Measuring Volatility and Correlation**

**This module explains in details the concept of volatility. It helps the user understand:**

- . The concept of volatility and volatility clustering
- . The conditional volatility models viz., Exponential Moving Average approach and GARCH
- . The importance of time errors and the impact of crashes on correlation and its effect on VaR calculation

Duration: 1 hour

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## **Advanced Scenario Analysis and Stress Tests**

**This module deals with the concept of Advanced Scenario Analysis and Stress Tests. It helps the user understand:**

- . The application of stress testing to a group of reporting firms through aggregation
- . The various techniques like Maximum Loss and Extreme Value Theory
- . How systematic stress testing is used with the help of stress test matrices

Duration: 1 hour

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## **Risk Adjusted Performance Measurement**

**This module deals with the concepts of Risk Adjusted Performance Measurement. It helps the user understand:**

- . The concept and need for risk adjusted performance measurement
- . Risk capital and the measures of risk capital viz., revenue (or earnings) volatility, Earnings at Risk (EaR), and asset volatility Value at Risk (VaR)
- . The importance of capital allocation in risk adjusted performance measurement and the factors that affect them

Duration: 1 hour

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## **Job Aids**

- . Disclosures
  - . Benchmarking Data
  - . Policy Templates
  - . Measurement Tools
  - . Global Best Practices
- Powered by KESDEE, Inc.

## **Language Options**

También, se ofrece este curso en Español. Llamada para más información.

For more information regarding administrative policies such as complaints and refunds, please contact our offices at 212-641-6616.