



## Value At Risk

This course establishes the building blocks of risk management (risk, return, normal distribution, correlation and volatility) and features practical, hands-on exercises and examples.

### Available Session(s):

10-Nov-2008 -- 11-Nov-2008	New York	USD \$2375
NY Institute of Finance - Midtown	9:00am - 4:30pm	Mon Tue
Instructor(s):[Joseph Onochie; ]		

### Targeted Audience

Risk managers and analysts, treasurers, pension fund managers, auditors, controllers, regulators, legal and compliance staff.

### Special Offer

Clients who register for this course will receive a complimentary 6 month subscription to the Financial Times and FT.com. The Financial Times is the world's most respected financial newspaper, providing a broad assessment on finance, business and the industrial sector. Subscriptions will start within 6-8 weeks of the application process and are limited to one per client. For questions about your subscriptions call 800-628-8088 or email [uscirculation@ft.com](mailto:uscirculation@ft.com). US and Canada enrollees only.

### Advance Preparation

No advance preparation required.

### Prerequisites

Essentials of U.S. Capital Markets or equivalent knowledge of capital markets.

### Learning Objectives

Students will be able to:

- Be exposed to the three methods of determining value at risk

- Appreciate the benefits and be aware of the drawbacks of value at risk
- Learn the many applications of value at risk in finance

## **Alumni Comments**

*"Excellent interaction with students. Clear and concise answers."*

*"Complex subject explained in an easy-to-understand manner."*

*"The instructor is a strength of this course."*

*"The instructor is a strength of this course. He gave great examples and made sure that everyone understood them."*

*"This course includes hands-on examples, as well as sufficient background information."*

## **Follow-Up Courses**

Risk Management Suite

**Level:** Intermediate

**CPE Credits:** 14

**Instructional Method:** Group-Live

## **Detailed Outline**

### **Overview risk management**

- Galaxy of risks
- Types of risks
- Market risk measurements
- Controlling risk
- Qualitative vs. quantitative

### **Value at risk**

- G-30 study

### **Average and volatility**

- Average
- Rate of return
- Standard deviation
- Volatility

### **Probability**

- Simple probabilities
- Probability distributions
- Probability density function

## **Normal distributions**

- Normal curve

## **Standard normal curves and confidence levels**

- Standard normal distribution
- Standard normal table
- Confidence levels
- Using z-scores to determine minimum return

## **Value at risk**

- Calculation
- Interpretation
- Factors impacting VaR
- Adjustment for time

## **Value at risk methodologies**

- Variance-covariance

## **Correlation and covariance**

- Correlation
- Correlation and risk
- Calculation of correlation
- Correlation and covariance
- Correlation matrix
- Variance-covariance matrix
- Calculation of variance
- Portfolio volatility

## **Riskmetrics**

- What is it?
- Advantages
- Disadvantages

## **Monte Carlo simulation**

- Calculating the path
- Example IBM
- Advantages
- Disadvantages

## **Historical simulation**

- Example IBM
- Advantages
- Disadvantages
- Summary value at risk

## **Options**

- Calls
- Puts

### **The Greeks**

- Delta
- Var, Delta, Delta normal
- Gamma
- Duration and convexity
- Theta
- Vega

### **Applications**

- Market risk limits
- Risk adjustments
- Verifying models
- Capital requirements

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