

# MARKET RISK MANAGEMENT AND VAR MODELS MASTERCLASS



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LIVE ONLINE / CLASSROOM PROGRAM

## Market Risk

V

VALUE



A

AT



R

RISK



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# Course Overview

Risk management is the process of identifying and measuring risk and ensuring that the risks being taken are consistent with the desired risks. The process of managing market risk relies heavily on the use of models. A model is a simplified representation of a real world phenomenon. Financial models attempt to capture the important elements that determine prices and sensitivities in financial markets. In doing so, they provide critical information necessary to manage investment risk.

At BIZENIUS Masterclass we will help you understand value at risk (VaR), discuss three primary approaches to estimating value at risk, and cover the primary advantages and limitations as well as extensions of value at risk. We then address the sensitivity measures used for equities, fixed-income securities, and options and also cover historical and hypothetical scenario risk measures. Next, we discuss the use of constraints in risk management, such as risk budgeting, position limits, scenario limits, stop-loss limits, and capital allocation as risk management tools. Lastly, we describe various applications and limitations of risk measures as used by different types of market participants and summarize our discussion. This masterclass will equip professionals with the tools and insights necessary to safeguard financial stability amidst the ever-changing market dynamics.

## Key Factors Affecting VaR Accuracy and Reliability



*Join your professional community.*

## BECOME AN EXPERT

# Benefits of Attending



- **Market Risk Management -Frameworks & Strategies**
- **Identify best-practice frameworks for assessing market risk.**
- **Estimate Value at Risk and use in a risk management strategy**
- **Explain the use of value at risk (VaR) in measuring portfolio risk**
- **Organizational set up for Market Risk Management**
- **Models of Market Risk Management and Techniques used.**
- **Risk Management Tools for Market Risk**
- **The Role of Back Testing for VaR**
- **The evolution of Basel capital requirements for market risk**
- **Best Practices and Regulatory Requirements**
- **Real-world Examples of VaR Implementation**

## MARKET RISK MANAGEMENT –FOCUS & IMPACT AREAS

### Pre Deal

- Limits Management
- Cross currency Exposure Monitoring
- Risk Management

### Internal Model Approach

- Value at Risk – Historical Method
- Back Testing
- Stress Testing / Scenario Analysis
- Analytics with drill down

### Rate Tolerance / Rate Scan

- Need for point in time & historical tick data
- Scalability across cross asset portfolio to monitor outliers



### Cash flow

- Complete & Accurate
- Updated Instrument Data

### Valuation

- Real time / End of data market prices
- Illiquid Instruments
- Structured Products
- Cross Asset Portfolio valuation
- CVA

### Compliance

- Reporting
- Audit

# Who Should Attend :

The in-house training version may be tailored to your specific industry need. This course is suitable for novice and experienced participants. It is designed robustly to give you both basic concepts and principles for novice participants as well as ample opportunity for experienced participants to amplify the principles and concepts through reflection on your own work experience.

- Market Risk Management
- Credit Risk Management
- Operational Risk Management
- Risk Methodology
- Risk Analysis
- Model Validation
- Regulatory and Economic Capital Basel III
- Counterparty Risk
- Treasury Team
- ICAAP and ILAAP
- Financial Advisor
- Stress Testing
- Internal Audit
- Finance and Treasury
- Regulation Compliance
- Financial Institutions Advisory
- Bank Supervision & Bank Regulation
- Financial Stability and Economic
- Risk team
- Reporting Team



## After Attending This Course You Will Be Able To:

- 1.Acquire strategies and techniques for effectively managing market risk, ensuring alignment with risk tolerance and capacity.
- Learn different Models of Market Risk Management and Techniques used.
- Governance structure, Role of Market Risk Management Department, models and examples.
- Cultivate a mindset of continuous improvement in market risk management practices, staying abreast of evolving market dynamics and emerging risks.
- Understand the unique challenges of market risk management for fund managers
- Statistical concepts such as Probability Distribution, Volatility, Correlation and Regression
- Model market factors such as interest rates, equity, and commodity prices.
- Organizational set up for Market Risk Management
- Estimate and interpret VaR under the parametric, historical simulation, and Monte Carlo simulation methods
- Describe sensitivity risk measures and scenario risk measures and compare these measures to VaR

# AGENDA

## **Understanding Market Risk Management:**

- Market Risk Loss for Banks
- Market Risk Framework
- Organizational set up for Market Risk Management
- Types of Market Risk
- Stand-alone risk and Portfolio Risk

## **BCBS guidelines on IRR management:**

- Components of interest rates as given by (BCBS)
- Components of a non-traded pure loan
- Measurement methods of IRRBB
- Earnings based measure
- Economic value based measure
- Limitations in IRRB estimation
- Management and control of Interest Rate Risk
- BCBS Principles of IRR Management

## **Risk Management Tools for Market Risk:**

- Defining a returns process for a price series
- Modelling the returns process
- Asset/liability size and equivalents
- Sensitivities of positions to market moves
- Arbitrage principles for pricing and sensitivities – Forward pricing and probability

## **Stress Testing:**

- Objectives
- Need for Stress Testing
- Incorporating into Market Risk Models
- Implementation
- Evaluating Stress Tests

## **Tools and techniques for measurement of market risk:**

- Measurement of market risk
- Modified Duration & Convexity
- PVBP
- VaR Approach
- Simulation
- Stress testing

## **Market Risk Models:**

- Objectives
- Introduction
- Parametric Models
- Historical Simulation Models
- Monte Carlo Simulation Models
- Value at Risk Implementation
- The process of value at risk implementation
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## **Portfolio Market Risk Tools:**

- Aggregation of positions – From the many to the few
- Portfolio effects from correlation and diversification
- Composite risk measures
- VaR and other portfolio risk models

## **Scenario Analysis and Stress Tests:**

- Aggregate Stress Tests
- Maximum Loss Approach
- Extreme Value Theory
- The technique of backtesting
- The different types of backtesting

# AGENDA

## Understand Value at Risk (Var) :

- Understanding the Importance of VaR in Risk Management
- Value at Risk Parameters
- Role of VaR
- Regulators and VaR
- Determining VaR
- Evaluating VaR
- Application of VaR

## Value at Risk-I: VaR

- 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 strength and limitation of VaR

## Value at Risk-II: VaR

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

## Regulator's guidelines for measurement and management of IRR:

- Methods of Interest Rate Risk Measurement
- Traditional Gap Analysis [TGA] Model
- Duration Gap analysis [DGA] Model
- Statement of Interest Rate Sensitivity – Time buckets
- Reporting of the Interest Rate Risk position to Regulators

## Description of Advanced VaR Models:

- The various emerging forms of VaR viz., Component VaR and Del VaR
- The impact on individual trades on Total VaR using these forms
- The advancements in Monte Carlo Simulation
- The variance reduction techniques employed for Monte Carlo Simulation
- Real-world Examples of VaR Implementation
- Comparing Risk Measurement Techniques
- Best Practices and Regulatory Requirements
- Key Factors Affecting VaR Accuracy and Reliability
- The Pros and Cons of VaR as a Risk Measurement Tool

## Risk Adjusted Performance Measurement:

- Understand concept and need for risk adjusted performance measurement
- Risk capital and details of the measures for 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



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Our Live online Training feature international thought leaders presenting insight, ideas, and advice. The sessions provide timely and strategic information about the business of learning, current trends impacting workforce development, Digital Innovation, Financial and Risk management, healthy safety, best practices for the industry, and practical information on the latest tools and technology. All our programs are interactive, flexible, and timely, our online training opportunities deliver the content you need to advance your career in a format that works for today's changing industry.

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- **Flexible Scheduling** - Select your own dates and timing or go with a pre-scheduled session.
- **Learn from Leaders** - All our program is conceptualized developed and delivered by the market leaders.

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- Safwa Islamic Bank
- Bank Windhoek
- National Bank of Kenya
- Bloom Bank
- The United Bank
- Capital Bank
- Bank Audi
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- Fidelity
- DBN
- Alizz Islamic Bank
- National Bank of Malawi
- MoniPlus
- NFC Bank
- BPR
- CABS
- Steward Bank
- PRASAC
- Central bank Oman
- Alliance Bank Malaysia
- Pride Microfinance Ltd
- FDH Financial Holdings
- Exim Bank
- MyBucks
- BNP Paribas
- Land and Houses Bank Public
- Grenada Co-operative Bank Ltd
- St. Kitts Nevis Anguilla National Bank Ltd
- Ahli United Bank
- Keystone Bank
- Saib Bank
- Bank Muscat
- Afreximbank
- Raw Bank
- FBN Bank
- Bred Bank
- Union Bank
- Credit Bank
- Ly Hour
- SABB
- BANK ABC
- NBS Bank
- BCI
- Centenary Bank
- National Trust Bank
- National Bank of Egypt
- Rand Merchant Bank
- Capricorn Group Limited
- Egyptian Arab Land Bank
- Coronation Merchant Bank
- Arab Africa International Bank
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