Course:
Risk Management Essentials in the Financial Services - Part III

Course Description

This course provides an advanced and comprehensive exploration of portfolio risk management, financial regulation, modern risk management technologies, and practical applications of risk management principles in both institutional and personal finance. The course builds upon earlier foundations in risk management and focuses on how financial institutions, investors, regulators, and individuals manage increasingly complex financial and operational risks in modern markets.

The course begins with an in-depth examination of portfolio risk and Modern Portfolio Theory (MPT). Participants are introduced to the concepts of portfolio construction, diversification, correlation, systematic and idiosyncratic risk, and the role of asset allocation in reducing overall portfolio volatility. The presentation explains how diversification works in practice, while also highlighting its limitations during periods of financial stress when correlations between asset classes often rise sharply. Key financial theories and models are referred, including the Efficient Frontier, Capital Market Line (CML), Capital Asset Pricing Model (CAPM), beta, alpha, and Jensen's Alpha. Participants also learn how professional investors evaluate risk-adjusted performance using measures such as the Sharpe Ratio, Sortino Ratio, Treynor Ratio, tracking error, and maximum drawdown. Real-world examples, including the 2022 breakdown of the traditional 60/40 portfolio and the collapse of Long-Term Capital Management (LTCM), demonstrate how market crises can challenge theoretical assumptions about diversification and risk management.

A major section of the course focuses on behavioural finance and the psychological factors that influence investment decisions. Topics such as loss aversion, herd behaviour, overconfidence bias, recency bias, and speculative bubbles are examined in detail. Participants learn how investor psychology can amplify market volatility, contribute to financial crises, and distort rational decision-making. Historical examples including the Dot-com Bubble, cryptocurrency speculation, meme-stock rallies, and financial market panics are used to demonstrate how emotional and behavioural biases affect portfolio management and market stability.

The course also provides a detailed overview of financial regulation and compliance frameworks. Participants are introduced to the role of major global regulators such as the Federal Reserve, European Central Bank (ECB), Securities and Exchange Commission (SEC), and Basel Committee on Banking Supervision. The presentation explains the evolution of Basel I, Basel II, Basel III, and Basel IV regulatory frameworks, including capital adequacy requirements, liquidity standards, leverage ratios, and stress testing obligations for banks. Other major regulatory topics include Dodd-Frank, MiFID II, Solvency II, IFRS 9, Anti-Money Laundering (AML), Know Your Customer (KYC) obligations, sanctions compliance, ESG and climate risk regulation, GDPR data privacy requirements, and whistleblowing governance frameworks. The course emphasizes the increasing importance of compliance culture, risk governance, and regulatory oversight in maintaining financial stability and protecting market integrity.

Several important real-world case studies are referred throughout the presentation, including the collapse of Barings Bank, the Wirecard accounting scandal, LIBOR manipulation, the FTX cryptocurrency collapse, and operational failures such as the Knight Capital trading error. These examples demonstrate how failures in governance, controls, technology, and ethics can create catastrophic financial, operational, legal, and reputational consequences for organizations and financial systems.

The final sections examine the growing role of technology and data analytics in risk management. Participants are introduced to Risk Management Information Systems (RMIS), Monte Carlo simulations, scenario planning, risk dashboards, artificial intelligence, machine learning, real-time risk monitoring, cybersecurity risk, and operational resilience. The seminar explains how modern financial institutions increasingly rely on advanced analytics and AI-driven tools for credit scoring, fraud detection, stress testing, and predictive risk management, while also addressing the new operational and governance risks created by technological dependence. Finally, the presentation concludes by applying risk management principles to personal finance, helping individuals assess their own risk tolerance, build diversified investment portfolios, and develop long-

term financial resilience strategies. Overall, the course offers a highly practical and advanced overview of modern financial risk management, integrating quantitative analysis, behavioural finance, regulation, technology, and strategic decision-making into a comprehensive educational framework.

Topics covered

The course is split into the following sections:

Section 1: Portfolio Risk & Modern Portfolio Theory

- What Is a Portfolio?
- Portfolio Risk vs. Individual Asset Risk
- Diversifiable vs. Non-Diversifiable Risk
- Systematic vs. Idiosyncratic Risk
- How Diversification Reduces Portfolio Risk
- Correlation and Its Role in Portfolios
- Positive, Negative, and Zero Correlation — With Examples
- Why Correlations Change During Crises
- Pre-2008 correlations were lower
- Covid-crisis correlations were much higher
- Home Bias in Investing
  - Locals invest Locally
- Overdiversification — Can You Diversify Too Much?
- Introduction to Modern Portfolio Theory (MPT)
- Harry Markowitz and the Efficient Frontier
- The Efficient Frontier
- The Capital Market Line (CML)
- The Capital Asset Pricing Model (CAPM)
- Beta — Measuring Systematic Risk
- Alpha — The Return Beyond Market Risk
- CAPM Assumptions and Criticism
- Jensen's Alpha Explained
- Calculating Jensen's Alpha
- Risk-Adjusted Performance Metrics — Overview
- The Sharpe Ratio
- The Sortino Ratio — Focusing on Downside Risk
- Comparing Sharpe vs. Sortino Ratios
- The Treynor Ratio
- Maximum Drawdown as a Risk Measure
- Portfolio Rebalancing as a Risk Control
- Tracking Error Explained
- Factor Investing and Risk
- Limitations of Modern Portfolio Theory
- Real-World Challenges to MPT
- Beyond MPT — Behavioural Finance Perspectives
- Loss Aversion and Investor Psychology
- -Examples
- Herd Behaviour in Financial Markets
  - Examples
- Overconfidence Bias in Investing
- Recency Bias and Market Decision-Making

Examples
- Behavioural Causes of Market Bubbles
  - Case studies
- Key Lessons from Long-Term Capital Management (LTCM)
- Diversification Failure During the Dot-Com Bubble

Section 2: Risk Regulation & Compliance

- Why Financial Markets Are Regulated
- The Role of Regulators Globally
  - Federal Reserve
  - U.S. Securities and Exchange Commission
  - European Central Bank
- International Coordination in Financial Regulation
- Basel Accords — What They Are and Why They Exist
- Basel I — The Starting Point
- Capital Adequacy Ratio (CAR) Explained
- Tier 1 vs. Tier 2 Capital
- Risk-Weighted Assets (RWAs)
- What are Risk-Weighted Assets (RWAs)?
- What affects RWAs
- Basel II — Adding Sophistication
- Basel III — Lessons From the Financial Crisis
  - Capital Requirements
  - Liquidity Requirements
  - Requirements (Capital, Liquidity, Leverage)
  - The Three Pillars of Basel III
- Basel IV — What's Changing Next
- The Dodd-Frank Act — U.S. Financial Reform
- MiFID II — European Market Regulation
- Solvency II — Insurance Sector Risk Rules
- IFRS 9 — Accounting for Credit Risk
- Stress Testing Requirements for Banks
- AML (Anti-Money Laundering) Regulation
- European AML Regulation and Example
- KYC (Know Your Customer) Requirements
- European KYC Rules
- Sanctions Compliance in Global Finance
- European Sanctions Framework and Example
- ESG Regulation and Climate Risk
- Data Privacy Regulation in Finance
- Whistleblowing and Risk Governance
- The Role of Internal Audit in Risk Management
- Compliance Risk — The Cost of Getting It Wrong
- The Future of Financial Regulation
- Case studies

Section 3: Risk Management Tools & Technology

- The Evolution of Risk Management Tools
- Risk Management Information Systems (RMIS)

- Introduction to Monte Carlo Simulation
- Scenario Planning as a Strategic Tool
- Risk Dashboards — What Good Looks Like
- Artificial Intelligence in Risk Management
- Machine Learning for Credit Risk Scoring
- Big Data and Real-Time Risk Monitoring
- Cybersecurity as a Financial Risk
- Technology Risk — Opportunities and Pitfalls
- Case studies

Section 4: Building a Personal Risk Framework

- Applying Risk Management to Personal Finance
- Assessing Your Own Financial Risk Tolerance
- Building a Diversified Personal Portfolio
- The Complete Risk Management Picture

Course Duration

This course may take up to 5 hours to be completed. However, actual study time differs as each learner uses their own training pace.

The course is addressed to:

This course is addressed to all individuals who are involved in Investment Firms (forex, brokers, etc), Funds' industry, Funds Management industry, risk analysts and risk officers, banking and financial services employees, Electronic Money Institutions and Payment Service Providers employees, consultants, professionals in finance industry and in general to all professionals who are interested to learn and enhance their knowledge about risk management.

Training Method

The course is offered fully online using a self-paced approach. The learning units consist of power point presentations. Learners may start, stop and resume their training at any time.

At the end of the course, participants take a Quiz to complete the course and earn a Certificate of Completion once the quiz has been passed successfully.

Registration and Access

To register to this course, click on the *Take this course* button to pay online and receive your access instantly. If you are purchasing this course on behalf of others, please be advised that you will need to create or use their personal profile before finalizing your payment.

Access to the course is valid for 90 days.

If you wish to receive an invoice instead of paying online, please Contact us by email. Talk to us for our special Corporate Group rates.

Instructor

With more than 10 years of experience, Nektarios is an expert in the financial services industry, having worked in key roles at investment funds, CIFs and other service providers. His exposure to the industry allowed him to gain knowledge in a variety of vital investment functions.

Complementing his practical knowledge of the industry, Nektarios also holds a number of professional and academic qualifications, including CySEC's Advance Certification. He is currently employed by an Investment Fund.