



FRM 2009® Certification Prep Kit

Course Outline:

- Understanding how FRM 2009 Exam is structured and overview of credit, market operational risk and present financial market crisis, Introduction to risk-return and portfolio theory in finance.
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- Mean, variance, Kurtosis, skewness
 - Correlation and covariance
 - Probability distributions
 - Regression, hypothesis testing and statistical interference
 - Simulation methods: Monte Carlo
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- Financial markets
 - Interest rates and Fixed Income Instruments
 - Futures, Forwards, FRA and SWAPs
 - Behavior of Stock process
 - Options: Plain-vanilla and Exotics, Trading strategies, Black-Scholes Model, Binomial Trees and Greeks
 - Volatility term structure and Volatility smile
 - Derivatives on equity, foreign exchange, market index, interest rates and
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- VaR: Analytic, Historical Simulation and Monte Carlo Simulation

- VaR of instruments with linear and non-linear Pay-offs, First order and second order approximations:
- Duration, Convexity, Delta, Gamma; Full-revaluation
- Credit VaR: Exposure and portfolio expected and unexpected loss
- Stress testing and Scenario Analysis

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- Market efficiency, Portfolio theory, CAPM, APT
 - Risk-return and performance analysis (Sharpe ratio, Tryenor ratio, Jensen Alpha, Sortino ratio etc.)
 - Practice exam

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- Case-Studies: Risk Management failures
 - Backtesting VaR
 - Mapping cash-flows and risk positions
 - Coherent risk measures: Expected shortfall
 - Extreme value theory
 - Copulas and tail dependence
 - Mortgage backed securities

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- Securitization
 - Credit derivatives: CDS, CLN, Basket products, Nth-to-default, CDO
 - Credit risk mitigation techniques

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- Subprime and credit crisis
 - CDO, MBS
 - Liquidity crisis
 - Limitation of VaR, Stress testing, coherent measures of risk, tail dependence

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- PD (KMV, Merton, Reduced-form models), LGD, EAD and default correlation
 - Exposure and portfolio expected and unexpected loss and Portfolio models

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- Basel II capital requirement: Pillar I, Pillar II and Pillar III

- Operational risk: Definition, Business lines, Risk types, KRI, RCSA, Loss data models and scenario analysis.
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- Performance analysis
 - Hedge funds: Strategies and risk measurement
 - Pension fund risk management
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