Risk Management for NonQuants

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An Education in Risk Management Can Offer a Leg Up, according to a recent New York Times article. Among the hot areas now are positions related to minimizing risk, as firms try to mitigate the chances of another financial crisis. Risk in general is a relatively new focus, and the openings range from business, credit and operational risk to product and technology risk. Today nearly everyone in the financial services industry has risk management listed in their job description. Yet, when trying to grasp the concepts, many people are intimidated by the mathematics in most texts and risk courses.

This is a unique 2 day seminar covering the essential topics of risk management, requiring only basic high school math skills. If you need to read and understand risk reports, interact with risk managers or just want to broaden your expertise in a critical skill, this is the seminar. It is not aimed at financial engineers looking for hedging and trading strategies, but for those managers responsible for monitoring, measuring and controlling risks. It is a pragmatic course for practitioners who must deal with or are regulators, board members or senior management

1. Review of Modern Portfolio Theory (MPT)
    a. Portfolio construction using return and volatility
    b. Efficient Market Hypothesis
    c. Capital asset pricing model (CAPM)
    d. Behavioral Finance
2. Review of key concepts in probability and statistics
    a. Normal distribution, average and standard deviation
    b. Z scores
    c. Asset price changes – log normal method
3. Intro to risk management
    a. Types of risk – market, credit, liquidity, operational, etc.
    b. World market correlation
    c. Examples of financial disasters
4. Barings case, Soc Gen and discussion of rogue trading
    a. Management red flags

5. Value at Risk --VaR
    a. Risk measures for various asset classes
    b. Why VaR?
    c. Historical VaR
    d. Parametric VaR
    e. Time scaling and market trend risks
    f. Portfolio VaR
    g. VaR Tools – Marginal, Component, VaR, etc.
    h. Barings revisited – Actual positions and their implication
    i. RAROC – Risk Adjusted Return on Capital
6. Monte Carlo (MC) Simulations
    a. Explanation of stochastics, Brownian motion, Markov and Weiner process, etc.
    b. Equity model
    c. Calculation of MC VaR
7. Measurement Errors
8. GARCH Volatility Models
9. Model Risk and Back Testing
10. Extreme Value Theory
    a. Exploring the fat tails
    b. CVaR and ES models of tail risk
11. Nassim Taleb and Black Swans
12. Liquidity Risk and Leverage
    a. Liquidity risk
        i. Liquidity of large cap US stocks
    b. Impact of leverage
    c. Hedge funds and their risk measures
    d. Suggested hedge fund reporting
13. Regulatory Environment
    a. 25 years of risk related regulations
    b. Basel I and II Basel III
        i. CVaR (Shortfall) replacing VaR
    c. Dodd Frank and the Volker Rule
14. Multifactor models
    a. Multifactor analysis and example of Barra software
15. Credit Risk -- General background – credit spreads Subjective Measures – CAMEL, 5 Cs Empirical -- Credit Scoring
    a. Ed Altman's Z-Score
    b. Transition Matrices -- Credit Metrics, etc. Financial Models
    c. Merton Model – KMV – using options price
    d. Reduced Form – Jarrow and Turnbull – using interest rate decomposition
    e. Credit Default Swaps – CDSs
        i. Settlement of CDS's

16. Operational Risk
    a. Defining Operational Risk Control Self-Assessment Key Risk Indicators – KRIs IT related op risk Calculating OpRisk VaR
    b. Basel oprisk measures
    c. Cybersecurity
    d. Six Sigma, TQM and Balanced Scorecards for process improvement

Final Words

Listing of books and web sites for further information