

OPTIMISED PORTFOLIO CONSTRUCTION

Advanced strategies for risk budgeting

Course Highlights include:

- Incorporating deviations from normality
- Portfolio resampling and estimation error
- Stochastic programming
- Liability benchmarking
- Risk budgeting: a planning and control process for investment funds
- Challenges of risk budgeting in a low volatility environment
- Risk budgeting in active management
- Alternative methods to optimisation

Course Tutors:

- **ABN AMRO** Kenrick Ramlochan
- **ASSET ALLIANCE CORPORATION** Elliot Noma
- **CONSULTANT** Michael de Marco
- **FORTIS INVESTMENTS** Henry Ma
- **JUDGE BUSINESS SCHOOL UNIVERSITY OF CAMBRIDGE AND CAMBRIDGE SYSTEM ASSOCIATES** Prof Michael Dempster
- **MERRILL LYNCH** Richard Horwitz and Erin Roye
- **MERRILL LYNCH INVESTMENT MANAGERS** Edward Fishwick
- **MORGAN STANLEY** Dr Hari Krishnan
- **MORLEY FUND MANAGEMENT** Frances Cowell
- **MPS ASSET MANAGEMENT IRELAND LTD** Pierangelo Franzoni
- **NOMURA SECURITIES** Alla Gil
- **OTA ASSET MANAGEMENT** Thomas Philips
- **PIONEER INVESTMENTS MANAGEMENT** Ali Chabaane
- **PUTNAM INVESTMENTS** Maurizio Ferconi

Who should attend?

This highly interactive training course provides a comprehensive insight into the various portfolio construction techniques providing you with the essential theory, tools and applications required to better manage your asset allocation. Practitioner-led examples illustrating the key concepts and methodologies make this course an essential guide for anyone who serves institutional investors, professionals and researchers at investment management firms and anyone who is involved in asset allocation or portfolio optimization decisions.

Risk

TRAINING

OPTIMISED PORTFOLIO CONSTRUCTION

Advanced strategies for risk budgeting

LONDON
BOSTON

22 & 23 May, 2006
15 & 16 June, 2006

Dear Executive,

Risk Training is pleased to announce our annual training course on **“Optimised portfolio construction – advanced strategies for risk budgeting”**.

Though modern portfolio theory provides a broad grounding to understand the interaction between risk and reward, portfolio managers’ perception of risk has changed with the recent bear markets and the popularity of alternative asset classes that exhibit non-normal returns. Practitioners are more concerned about downside risk measures than naive volatility as a measure of risk, notwithstanding the ongoing debate on the ability of these alternatives to deliver more resilient portfolios.

Through practitioner-led examples illustrating key concepts and methodologies, you will not only learn to understand the theories behind the processes, but will be able to apply this knowledge to your workplace.

Course highlights include:

- Determining key inputs to the optimisation process
- Robust statistical methods for portfolio construction
- Changes in market volatilities and correlations and their impact on the optimised portfolio – how to reduce sensitivity to the global market volatility through risk budgeting
- Non-convex optimisation with non-linear constraints – choosing an appropriate optimisation technique
- Dynamic alpha and risk allocation – optimising strategic management decisions

Risk Training courses are informal, practical and highly interactive. Therefore, places are strictly limited to ensure individual attention and maximum benefit to each participant. Make sure you book early to secure your place by calling our registration hotline on **+44 (0) 870 240 8859/+1 (212) 925 6990** or email **conf@incisivemedia.com**

I look forward to welcoming you to this course.

Yours sincerely,



Lynette Bush
Head of Training
RISK Training

LONDON – 22 & 23 May, 2006

London day one – 22 May, 2006

08.30 Registration and coffee

09.00 RISK BUDGETING: A PLANNING & CONTROL PROCESS FOR INVESTMENT FUNDS

- What is a risk budget?
- An investment approach based on risk budget
- Quantitative active portfolio modelling and management
- Asset allocation decision making
- Real world portfolio construction within a risk budget framework

Pierangelo Franzoni

Chief Investment Officer
MPS ASSET MANAGEMENT IRELAND LTD

10.30 Morning break

11.00 PORTFOLIO OPTIMISATION – ONLY AS GOOD AS THE INPUTS

- What is portfolio optimisation?
- A historical perspective – Markowitz mean-variance approach
- Pros and cons of optimisation
- Key inputs to the optimisation process
- Tracking error
- Reverse optimisation
- Simulation as an alternative to optimisation

Frances Cowell

Risk Manager, Portfolio Risk
MORLEY FUND MANAGEMENT

12.30 Lunch

13.30 CHALLENGES OF RISK BUDGETING IN A LOW VOLATILITY ENVIRONMENT

- Changes in markets volatilities and correlations and their impact on the optimised portfolios
- Funds management industry responses to low volatility environment
- Diversification versus offsetting management in concentrated portfolios
- The lifecycle of the management of risk budgets
- How to reduce the sensitivity to the global market volatility through risk budgeting

Ali Chabaane

Head of Risk and Quantitative Analysis
PIONEER INVESTMENTS MANAGEMENT

15.00 Afternoon break

15.30 RISK BUDGETING IN ACTIVE MANAGEMENT

- Risk budgeting, alpha, beta, and skill
- The role of model uncertainty
- Alternative objective functions for active portfolios

Edward Fishwick

Managing Director, Head of Risk and Quantitative Analysis
MERRILL LYNCH INVESTMENT MANAGERS

17.00 End of day one

London day two – 23 May, 2006

08.30 Registration and coffee

09.00 INCORPORATING DEVIATIONS FROM NORMALITY

- Review of downside risk measures and their comparison with normality
- Mathematical tools for lower partial moment based portfolio construction
- Applying technique to real world portfolio problems

Kenrick Ramlochan

Director of FX Analytics and Risk Advisory
ABN AMRO

10.30 Morning break

11.00 PORTFOLIO RESAMPLING AND ESTIMATION ERROR

- Estimating uncertainty in parameter inputs to a portfolio optimizer
- Creating resampled efficient frontiers
- Using Bayesian methods to combine prior assumptions, historical data and tactical views
- The market portfolio and the Black-Litterman model
- Using active managers in a total asset allocation framework
- Incorporating equity hedge funds as an overlay to traditional equity portfolios

Dr. Hari Krishnan

Executive Director
MORGAN STANLEY

12.30 Lunch

13.30 STOCHASTIC PROGRAMMING

- Scenario generation
- Dealing with data problems
- Non-linear instruments
- Non-normal distributions
- Non-standard preferences
- Determining stable portfolio compositions

Prof Michael Dempster

Director of the Centre for Financial Research, JUDGE BUSINESS SCHOOL (UNIVERSITY OF CAMBRIDGE) and Managing Director, CAMBRIDGE SYSTEMS ASSOCIATES

15.00 Afternoon break

15.30 ALTERNATIVE METHODS OF OPTIMISATION:

- Defining portfolio optimisation objectives
- Incorporating accounting, regulatory and market constraints
- Mean/variance – when does it work
- Non-convex optimisation with non-linear constraints: how to choose an appropriate optimisation technique
- Dynamic alpha and risk allocation – optimising strategic management decisions
- Working example: adaptation of polytope method

Alla Gil

Managing Director
Head of International Capital Solutions Group
NOMURA SECURITIES

17.00 End of course

Boston day one – 15 June, 2006

09.00 Registration and coffee

09.30 RISK BUDGETING: A PLANNING & CONTROL PROCESS FOR INVESTMENT FUNDS

- What is a risk budget?
- Risk tolerance: willingness and capacity to take risk
- Asset allocation decision-making
- Non-uniform utility functions and asymmetric returns
- Risk budget versus fixed-mix policy (a brief case study)

Michael de Marco

Consultant

11.00 Morning coffee

11.30 PORTFOLIO OPTIMISATION – ONLY AS GOOD AS THE INPUTS

- A historical perspective – the Markowitz mean-variance approach
- Alternative optimisation formulations and techniques
- Robust estimation of inputs to the optimisation process, particularly volatilities and correlations
- Pros and cons of optimisation

Thomas K. Philips

Head of Investment Strategy and Risk Control
OTA ASSET MANAGEMENT

12.30 Lunch

13.30 RISK BUDGETING IN ACTIVE MANAGEMENT

- Differentiate alpha from beta
- Measure uncertainty of alpha
- Risk budgeting on alpha generation
- The role of model uncertainty
- Alternative objective functions for active portfolios

Henry Ma

Head of Quantitative Research
FORTIS INVESTMENTS

15.00 Afternoon break

15.30 CONSTRUCTING “RISK - EFFICIENT” PORTFOLIOS

- Managing diversification
- How many positions/trades/funds?
- Performance persistence - value in portfolio construction
- Marginal measures of risk
- Real-life examples

Richard Horwitz, Director Risk Management & Erin Royce
Research Associate MERRILL LYNCH

17.00 End of day one

IN-HOUSE TRAINING

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Boston day two – 16 June, 2006

08.30 Registration and coffee

09.00 PROBLEMS WITH DATA

- Bayesian techniques
- Setting up the data – problems of estimation error and time series of different length
- Beyond a one period framework of static optimisation

Elliot Noma

Senior Vice President and Chief Risk Officer
ASSET ALLIANCE CORPORATION

10.30 Morning coffee

11.00 INCORPORATING DEVIATIONS FROM NORMALITY

- Review of downside risk measures and their comparison with normality
- Mathematical tools for lower partial moment based portfolio construction
- Applying technique to real world portfolio problems

Kenrick Ramlochan

Director of FX Analytics and Risk Advisory
ABN AMRO

12.30 Lunch

13.30 STOCHASTIC PROGRAMMING

- Scenario optimisation
- Dealing with outliers
- Non-linear instruments
- Addressing non-normality
- Multi-stage stochastic optimisation
- Robust statistical methods for portfolio construction

Maurizio Ferconi

Managing Director, Head of Financial Engineering
PUTNAM INVESTMENTS

15.00 Afternoon break

15.30 ALTERNATIVE METHODS OF OPTIMISATION:

- Defining portfolio optimisation objectives
- Incorporating accounting, regulatory and market constraints
- Mean/variance – when does it work
- Non-convex optimisation with non-linear constraints: how to choose an appropriate optimisation technique
- Dynamic alpha and risk allocation – optimising strategic management decisions
- Working example: adaptation of polytope method

Alla Gil

Managing Director
Head of International Capital Solutions Group
NOMURA SECURITIES

17.00 End of course

Biographies

Ali Chabaane

Ali Chabaane is currently the Head of Risk Strategies, in Pioneer Investments, in charge of investment risk measurement and risk-based strategies design. He has been focusing on the promotion of the risk budgeting approach, a key project for Pioneer Investments funds. He began his professional career with BNP Paribas in 1997 as a Financial Engineer, after three years he was promoted to the position of Head transversal Financial Modelling Team. He held the role of Head of Credit Risk Modelling within the Risk department of BNP Paribas to set up methodologies and tools for regulatory and economic capital management.

(London course)

Frances Cowell

Frances started in the investment management industry in 1983. She has managed domestic and international equity and fixed interest portfolios, and asset allocation; applying quantitative techniques that combine derivatives and physical investments to deliver portfolios with predefined risk characteristics. In 1998 she moved to the UK to work for QUANTEC, a major provider of portfolio risk management systems, and in 2002 took up duties as Interim Head of Portfolio Risk at Morley Fund Management. She now specialises in risk management for derivatives and hedge funds.

(London course)

Michael de Marco

Michael de Marco was a Director of Investment Risk Management for Wellington Management Company, developing risk analysis tools to support their investment decision-making, portfolio risk control, and performance attribution analysis. He was also a member of their Risk Management Committee, Trust Investment Committee, and Derivatives Counterparty Review Group. Before joining Wellington in 2002, he was part of the Strategic Relationship Team, at Putnam Investments, responsible for advising large institutional investors. Prior to this Michael has held very positions at GTE Investment Management and Citicorp. Michael has an MS from MIT, Sloan School, and a BS from Carnegie Mellon University in engineering and finance.

(Boston course)

Professor Michael Dempster

Michael Dempster has taught and researched in leading universities on both sides of the Atlantic and is currently Editor-in-Chief of *Quantitative Finance*. He has been consultant to a number of global financial institutions and is regularly involved in executive education in financial engineering and risk management around the world. Author of over 100 published research articles; his recent books include *Stochastic Programming, Derivative Securities* (with S R Pliska) and *Risk Management: Value at Risk and Beyond*. He is currently Managing Director of Cambridge Systems Associates Limited, a financial consultancy and software company.

(London course)

Maurizio Ferconi

Maurizio Ferconi is Head of the Financial Engineering group at Putnam Investments, where he is responsible for research, risk, performance attribution systems, analytics libraries and applications. Prior to joining Putnam Investments, he was the Head of Risk Analysis and Asset and Liability Management at Pioneer Investments.

(Boston course)

Edward Fishwick

Ed Fishwick is a Managing Director, and Head of Risk & Quantitative Analysis (EMEA Pacific), at Merrill Lynch Investment Managers in London. He has worked in quantitative finance for over 20 years in London, New York, and Boston. Previously he was Head of Risk Management & Investment Process Development at AXA Investment Managers, Director of Research at Franklin Portfolio Associates, and Director of Research at Quantec. He studied undergraduate and postgraduate economics at the universities of Liverpool and Cambridge respectively, is a frequent speaker at international finance conferences, is the author of a number of papers, and served on the Board of Trustees of the Global Association of Risk Professionals.

(London course)

Pierangelo Franzoni

Currently Director of Bright Oak Plc and Deputy General Manager and Chief Investment Officer of MPS Asset Management Ireland Ltd., the Quantitative Investment Management company of the World's oldest bank, Monte dei Paschi di Siena of Italy and. Previously he was Head of Risk Management & Quantitative Methods with Monte Paschi Asset Management of Milan and Asset-Liability Manager with Riunione Adriatica di Sicurtà (Allianz). He has been involved for years in academic activity as Adjunct Professor of Finance for Insurance & Pension Funds at University of Brescia, Italy. He holds a degree in Economics (Italy) and a MSc in Econometrics from Southampton University (UK).

(London course)

Alla Gil

Alla Gil's background is in theoretical mathematics and optimization. She has 15 years of financial experience. Prior to joining Nomura, Alla worked at Goldman Sachs, CIBC and Citigroup. As Managing Director and Head of International Capital Solutions Group at Nomura Securities in New York Alla is responsible for providing enterprise-level finance advisory for Nomura's international clients. Her group develops innovative methodologies for analyzing and modelling clients' exposures to different risk facets. The group advises the senior management of Nomura's clients on asset/liability and economic capital management and optimization, as well as interest rate, credit, currency, and liquidity risks.

(Boston and London courses)

Hari P. Krishnan

Hari P. Krishnan is an executive director at Morgan Stanley, where he is responsible for creating and managing customized fund of hedge fund portfolios for private clients, foundations and endowments. Previously, Hari was an options trading strategist for a market making firm at the Chicago Board Options Exchange and a senior economist at the Chicago Board of Trade. He has a BA from Columbia University, an MS and PhD in applied math from Brown University and was a postdoctoral research scientist at the Columbia Earth Institute.

(London course)

Richard Horwitz and Erin Roye

Richard Horwitz and Erin Roye are both part of Merrill Lynch's Hedge Fund Development and Management Group. Previously, both had been at Kenmar, a \$2 billion fund of funds. Rich was previously at Capital Market Risk Advisors and Sanford C. Bernstein. Erin was previously gazing at stars at the Space Telescope Science Institute.

(Boston course)

Henry Ma

Dr. Ma is the Head of Quantitative Research, US Fixed Income and Structured Credit at Fortis Investments. He is responsible for quantitative modelling and analytics, quantitative strategies and risk management for the US fixed income and structured credit products. Prior to Fortis, he was a Senior Vice President, Director of Fixed Income Strategies and a portfolio manager with Sun Capital Advisers, LLC. He managed interest rate risks, recommended fixed income strategies, and managed a long/short quantitative trading program. Before he joined Sun Capital in 2001, he was previously employed for five years at John Hancock Financial Services as a Senior Associate Investment Officer.

(Boston course)

Elliot Noma

Dr. Noma is responsible for the risk oversight of Asset Alliance's various product offerings including issues of valuation and quantification of trading and position risk for various strategies and hedging opportunities. Dr. Noma is a member of the Asset Alliance Investment Committee and the Index Committee for the CTA Index Fund. Dr. Noma is a member of the Financial Risk Manager (FRM) examination committee within the Global Association of Risk Professionals (GARP). Prior to joining Asset Alliance, Dr. Noma was Senior Risk Analyst, Fixed Income Products, Merrill Lynch Investment Managers (2000-2003). Earlier in his career, Dr. Noma was Director of Corporate Risk Management overseeing derivative and fixed income products within Deutsche Bank, Americas (1995-1999), and developed fixed income market strategies at, J.P. Morgan Securities (1993-1995). Dr. Noma also spent four years in the psychology faculty at Rutgers University (1983 - 1986) and his research has been published in numerous industry journals and scholarly periodicals. Dr. Noma graduated from Dartmouth College in 1972 with a BA in Mathematics. He received M.As in Mathematics and Psychology in 1979 and a Ph.D. in Mathematical Psychology in 1982 from The University of Michigan. In 1990, Dr. Noma received an Advanced Professional Certificate in Finance from New York University.

(Boston course)

Thomas Philips

Dr. Thomas Philips is Head of Investment Strategy and Risk Control at OTA Asset Management, a multi-strategy hedge fund based in Purchase, NY. Prior to joining OTA, he was Chief Investment Officer for seven years at Paradigm Asset Management, a quantitative shop in New York, where he oversaw the firm's investment processes and developed new products and services. Prior to joining Paradigm, Tom was Managing Director at RogersCasey with shared responsibilities in Research and Alternative Investments, where he was responsible for developing opportunistic investment tools for investing in alternative strategies. Previous to that, he spent eight years at the IBM Corporation - his first five conducting research on problems in Operations Research, Computer Science and Applied Mathematics at the IBM Thomas J. Watson Research Center; and the last three at the IBM Retirement Fund. Tom received his M.S. and Ph.D. in Electrical and Computer Engineering from the University of Massachusetts at Amherst, where he was elected a fellow of the graduate school. He has published over twenty five journal papers and book chapters on topics in finance, engineering and mathematics. He was awarded the first Peter Bernstein/Frank Fabozzi/Jacobs Levy prize for his paper "Why Do Valuation Ratios Forecast Long-Run Equity Returns" which appeared in the Journal of Portfolio Management.

(Boston course)

Kenrick Ramlochan

Kenrick Ramlochan is the Director of FX Analytics and Risk Advisory for Europe at ABN AMRO based in London. He is responsible for the provision of analytics and tailored solutions to institutional and corporate clients. Previously, he was the Head of Global Risk Analysis for Europe at Bank of America, responsible for a global client portfolio, advising on foreign exchange, fixed income derivatives and commodities issues. Prior to that, Kenrick was the Head of Asset Allocation at HSBC Asset Management and worked at Citibank in a variety of equity and foreign exchange derivative areas.

(London and Boston courses)

Code:

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