

ASSET LIABILITY MANAGEMENT

THE SOCIETY OF ACTUARIES

NEXUS RISK MANAGEMENT

Techniques and Practices for Insurance and Pensions

CO-SPONSORED WITH STANDARD & POOR'S,
THE INTERNATIONAL ACTUARIAL ASSOCIATION
AND THE CZECH SOCIETY OF ACTUARIES

**SEEK RISK OPPORTUNITIES.
CONTROL EXPOSURE.
CREATE VALUE.**

CORINTHIA TOWERS HOTEL
PRAGUE, CZECH REPUBLIC
APRIL 23-27, 2007



SOCIETY OF ACTUARIES

MEET NEW PENSION
CHALLENGES HEAD ON.

ASSET
THE SOCIETY OF ACTUARIES
LIABILITY
NEXUS RISK MANAGEMENT
MANAGEMENT

Techniques and Practices for Insurance and Pensions

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475 North Marquette Road, Suite 600
Schaumburg, IL 60173
www.soa.org

Actuaries
Risk is Opportunity.SM

PRESORTED
FIRST CLASS
U.S. POSTAGE
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HAMMOND, IN
PERMIT NO. 58



COURSE MATERIAL

TECHNIQUES AND PRACTICES

PRE-COURSE PACKAGE

1. Detailed Course Overview
2. Pre-Reading Package
3. Bibliography/List of Suggested Background Readings
4. SOA ALM Specialty Guide
5. Survey Questionnaire

ON-SITE PACKAGE

1. Hand-outs of All Presentations (Bound Copy and CD)
2. ALM Tools (Coded in Excel)
 - Bootstrapping techniques
 - Price sensitivity charts and statistics
 - Approximation techniques using Taylor Series Expansion
 - Impact of changes in interest rates on economic value
 - Stochastic models
 - Risk profile
 - Replicating portfolios and hedging techniques
 - Calculating volatility and building correlation matrices
3. Case Study Material
 - Annual reports
 - Regulatory frameworks regarding risk management
4. Sample Policy Templates
 - ALM Policy Statement and Procedure Manual
5. Sample ALM Report Template
6. ALM Committee Package
 - Agenda
 - Minutes
 - Reports
7. Group Assignments

MASTER CLASS—DYNAMIC HEDGING

ON-SITE PACKAGE

1. Course Manual and CD
2. ALM Tools (Coded in Excel)
 - Stochastic models
 - Delta hedging simulator
 - Dynamic hedging model
 - Option pricing calculator
 - Risk metrics and analytics to calculate Greeks
 - VaR and CTE
3. Case Study Material
 - Production descriptions (guaranteed products)
 - Stochastic models
 - Illustrative liability cash flows and market data
4. Group Assignments

MASTER CLASS—INTEREST RATE MODELS

ON-SITE PACKAGE

1. Course Manual and CD
2. ALM Tools (Coded in Excel)
 - Stochastic models
 - Collection of interest rate models
 - Model calibration
 - Historical market data
3. Application Exercise and Solutions

Asset Liability Management has long been recognized as a vital risk control function.

Insurance companies and their stakeholders have learned the lessons painfully as financial markets ruthlessly punish those with inadequate ALM discipline. Solvency II, the new risk-based capital regime to be finalised in 2007 and fully operational from 2010, specifies a number of risk measures that all financial firms will have to use.

Pension schemes, which previously blamed the global pension crisis on the “perfect storm” of negative equity returns and sustained low interest rates, acknowledge that the crisis could have been avoided with proper ALM. In these cases, Liability-Driven Investment (LDI) approaches are now widely adopted.

Beyond the risk control function, best practices have emerged that provide the opportunity to implement ALM as a strategic decision-making framework to maximize shareholder value.

COURSE OVERVIEW

This internationally acclaimed course continues to meet the changing needs of today's risk professional. A five-week e-learning pre-course covers ALM Essentials and prepares participants for the intense on-site experience. The five-day on-site program includes the core Asset Liability Management Techniques and Practices along with a new Master Class and Seminar series.

FIVE-WEEK E-LEARNING PRE-COURSE

ALM ESSENTIALS is designed to provide a review of fundamental ALM concepts. This five-week e-learning course delivers on-line lectures and practice sessions and includes valuable references and selected readings to help prepare participants for the intense Techniques and Practices that will follow. Participants who **register by March 16** will receive this valuable course material.

FIVE-DAY ON-SITE PROGRAM

TECHNIQUES AND PRACTICES provides intensive hands-on training on ALM techniques, practices and advance applications. Participants receive content-rich course materials along with valuable utilities and templates. Two tracks are offered for 2007:

- **TECHNIQUES AND PRACTICES FOR INSURANCE**
- **NEW for 2007! TECHNIQUES AND PRACTICES FOR PENSIONS**

Pre-course material, assigned readings and a number of application exercises will be provided for the participant to cover outside of class time. Participants will also be trained to use several valuable utilities and templates that are yours to keep and provided as part of the course fee.

Be prepared to roll up your sleeves!



NEWLY ADDED for 2007!

MASTER CLASSES are advanced one-day programs providing more than seven hours of hands-on applications and case studies. Two master classes are offered concurrently for 2007:

Dynamic Hedging teaches the key elements of executing a dynamic hedging program to hedge equity-based guarantees and provides hands-on practice through case studies and application exercises.

Interest Rate Models teaches stochastic modeling techniques and diffusion processes for interest rates and provides hands-on practice to build, calibrate and use interest rate models.

ASSET LIABILITY MANAGEMENT SEMINAR

The risk management landscape is changing rapidly. Greater recognition of risk exposure and more sophisticated techniques to measure and control risk are resulting in new regulation, new capital requirements, new account standards and new solvency framework. Asset Management has fundamentally changed as a result. Innovative ALM strategies are being called upon to address some of the greatest challenges faced by the insurance and pension industries:

- Implementation of Solvency II;
- Unhedged in-the-money embedded derivatives in insurance liabilities;
- Volatile solvency ratios and contribution rates in pension plans;
- Fixed income assets not available to match long liability cash flows; and
- Interest rates at historic lows.

Join your colleagues and listen as leading experts and money managers discuss their solutions.

TECHNIQUES AND PRACTICES *for Pensions*

MEET NEW PENSION CHALLENGES HEAD ON.





MONDAY, APRIL 23, 2007—DAY 1

- 7:30 Registration
- 8:00 Breakfast
- 8:30  **Welcome, Course Overview and Introductions**
C. Gilbert
- 8:50  **Lessons from "The Perfect Storm"**
J. Gold, S. Jarvis
- 9:20  **Overview of ALM Approaches for Pensions (Part 1)**
J. Gold, S. Jarvis
- 9:50  **Overview of ALM Approaches for Pensions (Part 2)**
J. Gold, S. Jarvis
- 10:30 Break
- 10:45  **The Term Structure of Interest Rates**
K. Ravindran
- 11:15  **Derive Spot Rate Curve Using Bootstrapping Techniques**
C. Gilbert
- 11:45  **Calculate Implied Forward Curve**
C. Gilbert
- 12:15 Lunch
- 13:30  **Valuation Methods**
A. Smith
- 14:00  **Value Assets and Liabilities**
C. Gilbert
- 14:30  **Identifying Risks**
A. Smith, C. Gilbert
- 15:15 Break
- 15:30  **Calculate Risk Metrics and Analyze Exposure**
C. Gilbert
- 16:00  **Quantify Interest Rate Risk Exposure**
C. Gilbert
- 16:30  **Apply ALM Techniques**
J. Gold, S. Jarvis
- 17:15  **Formulate ALM Strategy for Pension Fund**
J. Gold, S. Jarvis
- 18:00 Reception with Faculty/Informal Question and Answer
- 19:30 End


TUESDAY, APRIL 24, 2007—DAY 2

- 8:00 Breakfast
- 8:30  **Rebalance Portfolio to Within Risk Limits**
C. Gilbert, K. Ravindran, A. Smith, J. Gold, S. Jarvis
- 9:45  **Measure Impact of Change in Interest Rates**
C. Gilbert, K. Ravindran, A. Smith, J. Gold, S. Jarvis
- 10:00 Break
- 10:30  **Financial Economics**
A. Smith
- 11:00  **Determine Asset Mix Using Efficient Frontier Analysis**
C. Gilbert
- 11:20  **Overlay Strategies**
J. Gold, S. Jarvis
- 11:50  **Binomial Model**
A. Smith
- 12:30 Lunch
- 13:30  **ALM Practices**
J. Gold, S. Jarvis
- 14:15  **Policies and Controls**
J. Gold, S. Jarvis
- 14:45  **Risk Reporting and Communication**
C. Gilbert, A. Smith
- 15:30 Break
- 15:45  **Review ALM Practices of Leading Pension Funds**
J. Gold, S. Jarvis
- 17:00 End

KEY

-  Lecture
-  Application
-  Case study
-  Open forum

WEDNESDAY, APRIL 25, 2007—DAY 3

- 8:00 Breakfast
- 8:30  **Working Session**
J. Gold, S. Jarvis
- 9:30 Break
- 9:45  **Execute ALM Strategy for Pension Fund**
J. Gold, S. Jarvis
- 11:45 Review and Closing Remarks
- 12:00 End of Techniques and Practices for Pension
Registration and Lunch

ALL LECTURES AND COURSE MATERIALS WILL
BE CONDUCTED IN ENGLISH.

TECHNIQUES AND PRACTICES *for Insurance*

SEEK RISK OPPORTUNITIES. CONTROL EXPOSURE. CREATE VALUE.





MONDAY, APRIL 23, 2007—DAY 1

- 7:30 Registration
- 8:00 Breakfast
- 8:30  **Welcome, Course Overview and Introductions**
C. Gilbert
- 8:50  **Anatomy of a Failure: A Case Study**
C. Gilbert
- 9:20  **Rating Agency's View of Risk**
L. Santori
- 9:50  **ALM Framework Implementation**
C. Gilbert, A. Smith
- 10:30 Break
- 10:45  **The Term Structure of Interest Rates**
K. Ravindran
- 11:15  **Derive Spot Rate Curve Using Bootstrapping Techniques**
C. Gilbert
- 11:45  **Calculate Implied Forward Curve**
C. Gilbert
- 12:15 Lunch
- 13:30  **Valuation Methods**
A. Smith
- 14:00  **Value Assets and Liabilities**
C. Gilbert
- 14:30  **Identifying Risks**
A. Smith, C. Gilbert
- 15:15 Break
- 15:30  **Calculate Risk Metrics and Analyze Exposure**
C. Gilbert
- 16:00  **Quantify Interest Rate Risk Exposure**
C. Gilbert
- 16:30  **Apply ALM Techniques**
C. Gilbert, K. Ravindran, A. Smith
- 17:15  **Formulate ALM Strategies**
C. Gilbert, K. Ravindran, A. Smith
- 18:00 **Reception with Faculty/Informal Question and Answer**
- 19:30 End

TUESDAY, APRIL 24, 2007—DAY 2

- 8:00 Breakfast
- 8:30  **Rebalance Portfolio to Within Risk Limits**
C. Gilbert, K. Ravindran, A. Smith, J. Gold, S. Jarvis
- 9:45  **Measure Impact of Change in Interest Rates**
C. Gilbert, K. Ravindran, A. Smith, J. Gold, S. Jarvis
- 10:00 Break
- 10:30  **Financial Economics**
A. Smith
- 11:00  **Determine Asset Mix Using Efficient Frontier Analysis**
C. Gilbert
- 11:20  **Exotic Derivative Structures**
K. Ravindran
- 11:50  **Binomial Model**
A. Smith
- 12:30 Lunch
- 13:30  **ALM Practices**
C. Gilbert, A. Smith
- 14:15  **Policies and Controls**
A. Smith
- 14:45  **Risk Reporting and Communication**
C. Gilbert, A. Smith
- 15:30 Break
- 15:45  **Review ALM Practices of Leading Insurance Companies**
C. Gilbert, K. Ravindran, A. Smith
- 16:30  **Prepare ALM Report**
C. Gilbert
- 17:00 End

KEY

-  Lecture
-  Application
-  Case study
-  Open forum

WEDNESDAY, APRIL 25, 2007—DAY 3

- 8:00 Breakfast
- 8:30  **Working Session**
C. Gilbert, K. Ravindran, A. Smith
- 9:30 Break
- 9:45  **Participate in Mock ALM Committee Meeting**
C. Gilbert, K. Ravindran, A. Smith
- 11:45 Review and Closing Remarks
- 12:00 End of Techniques and Practices for Insurance
Registration and Lunch

ALL LECTURES AND COURSE MATERIALS WILL BE CONDUCTED IN ENGLISH.

MASTER CLASS

DYNAMIC HEDGING





WEDNESDAY, APRIL 25, 2007

- 13:00  **Review of Hedging Instruments**
K. Ravindran
- 13:30  **Calculate the Greeks**
K. Ravindran
- 14:15  **Delta Hedging**
K. Ravindran
- 15:00 Break
- 15:15  **Execute Delta Hedge**
K. Ravindran
- 16:15  **Dynamic Hedging**
K. Ravindran
- 17:30 End

THURSDAY, APRIL 26, 2007

- 8:00 Breakfast
- 8:30  **Execute Dynamic Hedge for Variable Annuity**
K. Ravindran
- 9:30  **Attribution Analysis**
K. Ravindran
- 10:00 Break
- 10:15  **Pricing Exotics**
K. Ravindran
- 11:00 **Quantify Cost of Guarantees/Embedded Options**
K. Ravindran
- 12:00 End

KEY






-  Lecture
-  Application
-  Case study
-  Open forum

CASE STUDY






The case study approach will be used heavily throughout this course. Participants will interact with other industry professionals and learn through doing. Small workgroups will be assigned for the case studies. Some case studies will require the use of a laptop computer.

INTEREST RATE MODELS

WEDNESDAY, APRIL 25, 2007

- 13:00  **Introduction to Simulations**
C. Gilbert
- 13:30  **Generate Risk Profile Using Stochastic Techniques**
C. Gilbert
- 14:15  **Brownian Motion**
A. Smith
- 15:00 Break
- 15:15  **Program Stochastic Differential Equations**
C. Gilbert
- 16:15  **Diffusion Processes for Interest Rates**
A. Smith
- 17:30 End

THURSDAY, APRIL 26, 2007

- 8:00 Breakfast
- 8:30  **Generate Interest Rate Scenarios Using Spot Rate Models**
C. Gilbert
- 9:00  **Generate Interest Rate Scenarios Using Forward Rate Models**
C. Gilbert
- 9:30  **Generate Interest Rate Scenarios Using Market Models**
C. Gilbert
- 10:00 Break
- 10:15  **Calibrate Models Using Observed Market Prices**
A. Smith
- 11:00  **Calculate Interest Rate Risk Exposure**
A. Smith
- 12:00 End

ALL LECTURES AND COURSE MATERIALS WILL BE CONDUCTED IN ENGLISH.

APPLICATION

Exercises where participants learn by applying tools and techniques to real life examples. The exercises in the application sessions are designed to be completed by each participant individually. All applications require the use of a laptop computer. ALM tools and analytics will be provided.

ALM SEMINAR

THURSDAY, APRIL 26, 2007

- 12:00 Registration and Lunch
- 13:00 Opening Remarks
- 13:15 **GENERAL** Liability-Driven Benchmarks
- 14:15 Break, Networking and Informal Question and Answer
- 14:45 **PENSION** Implementing an LDI Framework
- INSURANCE** Asset Management with an ALM Framework
- 16:00 Break, Networking and Informal Question and Answer
- 16:30 **PENSION** Portable Alpha/Overlay Strategies
- INSURANCE** Conquering Risk with Reinsurance, Securitization and Derivatives
- 17:45 Reception and Networking
- 20:00 End

FRIDAY, APRIL 27, 2007

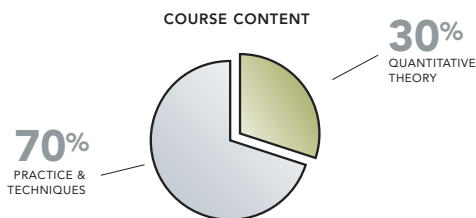
- 8:00 Breakfast
- 8:30 **GENERAL** Market Outlook and Impact
- 9:45 Break, Networking and Informal Question and Answer
- 10:15 **PENSION** Pension Regulation
- INSURANCE** Solvency II/CRO Forum
- 11:30 Lunch and Exhibits
- 13:00 **PENSION** Strategies for Managing Inflation and Longevity Risk
- INSURANCE** Credit Risk Management
- 14:15 Break, Networking and Informal Question and Answer
- 14:30 **PENSION** Determining Asset Allocation/ Risk Budgeting /Alternative Assets/ Risk Optimization
- INSURANCE** Integrating Economic Capital and ALM
- 15:45 Break, Networking and Informal Question and Answer
- 16:00 Ask the Experts
- 16:30 End



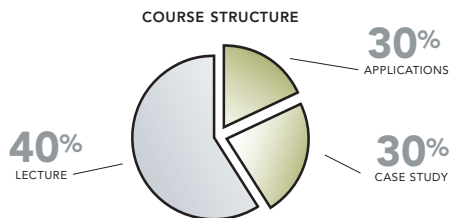
FROM THEORY TO PRACTICE

One of the first things ALM practitioners discover is that a lot of what they need to know to do their jobs is not found in any textbook. While the current literature offers a sound grounding in ALM theory, there is a paucity of industry-specific and nation-specific guidance for the practitioner. ALM, as practiced, differs from country to country, and further differences exist between pension schemes, banks and insurance.

Asset Liability Management Techniques and Practices covers the theory behind ALM, and then provides the practitioner with the knowledge needed that is not covered in textbooks. The focus of the course is on the ALM techniques and practices used by insurance companies and pension schemes.



Through the case studies and in-class applications, participants will learn by "doing." The state of ALM practice globally will be explored, and participants will gain an appreciation of how the ALM paradigm has changed and how companies can take ALM beyond risk mitigation.



Enrollment is limited to ensure the quality of the case studies and applications and provide the optimal learning environment.

WHO SHOULD ATTEND

This three-and-a-half-day course is targeted to five distinct groups:

- Senior management looking to gain a firm grasp of the financial risks facing their organizations, make more effective business decisions and use ALM strategically, beyond risk mitigation and compliance;
- ALM and pension practitioners perhaps already well versed in the underlying theory, but who want to gain further deep insight into the tools and techniques that are used in industry practice today;
- Professionals looking to enter into the field of ALM and who are willing to invest some additional time pre-course to learn the basic concepts;
- Asset managers and investment bankers wanting to provide ALM and LDI solutions to their clients; and
- Actuaries looking to gain a more in-depth knowledge of this key area of practice and fulfill PD credits towards their FSA designation.

VALUE PROPOSITION

TECHNIQUES AND PRACTICES

- Learn how to implement ALM as a strategic decision-making framework to gain competitive advantage and increase value
- Ensure appropriate policies and control procedures are in place
- Practice advanced techniques for measuring risk exposure
- Learn the limitations and pitfalls of various risk metrics
- Understand risk exposure and make more effective decisions
- Formulate ALM strategies
- Structure LDI solutions
- Produce an ALM report that effectively communicates the exposure
- Participate in a mock ALM committee meeting

MASTER CLASS—DYNAMIC HEDGING

- Learn about hedging instruments and dynamic hedging techniques
- Practice advanced techniques for measuring risk exposure
- Formulate a dynamic hedging strategy to hedge equity-based guarantees
- Execute a hedge position
- Perform attribution analysis
- Quantify the cost of guarantees/embedded options

MASTER CLASS—INTEREST RATE MODELS

- Learn stochastic modeling techniques
- Explore diffusion processes for interest rates
- Program Monte Carlo simulations
- Program stochastic differential equations
- Build interest rate models
- Calibrate models using market data
- Apply interest rate models to calculate risk exposure

ALM SEMINAR

- Keep on top of the latest developments on Solvency II and the associated implementation challenges
- Discover innovative LDI solutions for pensions
- Learn how asset management can be performed with an ALM/LDI framework
- Learn the strategies companies and pension schemes are using to solve their ALM challenges
- Convene with the world's leading risk practitioners
- Be part of an extraordinary networking opportunity for buy-side and sell-side professionals

FACULTY

CHARLES L. GILBERT, FSA, FCIA, CFA

Charles L. Gilbert is president and founder of Nexus Risk Management Inc., providing advanced risk management solutions to the financial services industry globally. Mr. Gilbert does a wide range of Asset Liability Management-related work for several insurance and reinsurance companies worldwide. Through a number of joint ventures, he executes ALM strategies and portfolio optimization for asset management clients, conducts ongoing research and provides training.

Previously, Mr. Gilbert was the leader of the ALM initiative for Tillinghast—Towers Perrin in North America—and he was responsible for building the equity risk management initiative for the firm.

Prior to joining Tillinghast, Mr. Gilbert was assistant vice president of Asset Liability Management and corporate actuary at ING Life, where he was responsible for Asset Liability Management, as well as the valuation, pricing and financial management for investment products. He developed innovative strategies to immunize the interest rate risk exposure on universal life and other life products and researched various ways to manage the risk associated with investment guarantees on variable annuities and segregated funds. Past experience includes U.S. and Canadian taxation, valuation and financial management.

Mr. Gilbert has more than 20 years of experience in the life insurance industry and has trained over 500 ALM practitioners, regulators, rating agency analysts and senior management on Asset Liability Management worldwide. He is a member of the Society of Actuaries' board of governors and serves on numerous task forces and working groups related to risk management.

JEREMY GOLD, FSA, MAAA, FCA, PH.D.

Jeremy Gold is proprietor of Jeremy Gold Pensions, which advises sponsors of defined benefit pension plans using a pension finance approach—investment analysis and strategic benefit advice from a corporate finance perspective.

Prior to forming his own firm in 1989, Dr. Gold headed Morgan Stanley Pensions with responsibility for developing and marketing Morgan Stanley products and services to the pension community. From 1979 to 1985, he was a consulting actuary/account executive at Buck Consultants. Earlier activities included actuarial consulting and systems development with pension consulting firms and insurance companies.

Dr. Gold is frequently quoted in benefit and investment periodicals, most recently in *Life and Pensions (UK)* (September 2006), as well as the general press, most recently in the *New York Times* (August 2006) and "The News Hour with Jim Lehrer" (TV, August 2006). Recent articles written by Dr. Gold include: "The Case Against Stock in Public Pension Plans," (*Financial Analysts Journal*, Forthcoming, with Lawrence N. Bader), "Reducing a Company's Beta—A Novel Way to Increase Shareholder Value" (*Journal of Applied Corporate Finance*, Fall 2006), and "Never Again: A Transition to a Secure Private Pension System" (*Journal of Portfolio Management*, Fall 2005).

Dr. Gold has testified before the U.S. Congress and the Financial Accounting Standards Board on the subject of post-employment medical benefits and before the ERISA Advisory Council of the U.S. Department of Labor on pension funding standards. He received his Ph.D. from the Wharton School of the University of Pennsylvania.

STUART JARVIS, MA, DPhil, FIA

Stuart Jarvis is a principal in the Strategic Solutions Group of Barclays Global Investors (BGI), based in London. This group is concerned with designing and managing investment strategies that are informed by an investor's overall asset/liability requirements. For pension plans, these fall under the general heading of liability-driven investment (LDI). As well as helping pension plans and other institutions to understand and implement LDI strategies, Mr. Jarvis leads the quantitative analytics and research within the Group.

He joined BGI in 2004, having worked for seven years for Bacon & Woodrow. His primary responsibility was as a benefits actuary, and he held a number of scheme appointments. Mr. Jarvis was heavily involved in developing the stochastic asset/liability modeling capabilities of the firm, and has been recognized as providing thought leadership to the actuarial profession's approach to liability valuation.

He was awarded a doctorate by Oxford University, and during his academic career, published a number of papers on mathematical physics. Mr. Jarvis has continued to write since switching to finance in 1997. His output includes the joint paper "Modern Valuation Techniques" that won the Staple Inn Actuarial Society's prize in 2001. He is regularly called upon to contribute to LDI articles, and has been quoted in the UK pensions press as well as by the *Financial Times*.

K. RAVINDRAN, PH.D.

Dr. K. (Ravi) Ravindran is the founding principal of Annuity Systems Inc. and the former chief executive officer of RGA Financial Products. Dr. Ravindran works with companies worldwide in all aspects of the risk management process including trade execution. He has personally managed the risk exposure associated with variable annuity products on assets under management of more than \$100 billion and has provided consulting on the equity risk exposure associated with assets under management of almost \$200 billion. Dr. Ravindran has also helped risk-manage equity-indexed annuity business and has provided extensive risk management services to the energy markets. He is known as the pioneer who applied derivatives-based hedging techniques from the capital markets to variable annuities.

Dr. Ravindran ran the exotic derivatives desk for Toronto Dominion Bank globally and has executed derivatives trades for clients as part of his risk management services. He has traded and made markets in nearly every category including equity, interest rate, currency, commodity, mortality and credit.

Dr. Ravindran is an adjunct professor at Reykjavik University. In addition to holding previous adjunct professorships at the University of Waterloo and the University of Calgary, he has taught graduate courses and executive programs at business schools around the world. He is the author of a number of books, papers and articles on derivatives and serves as associate editor of *Handbook of Derivatives*. Dr. Ravindran also manages a private equity fund that arbitrages mispriced products across different markets in alternative asset classes.

LAURA SANTORI, IAI

Laura Santori is a director at Standard & Poor's Financial Services Europe. She is the head of the Paris insurance team and Enterprise Risk Management Europe and initially focused on the analysis of southern European groups.

Ms. Santori joined Standard & Poor's in February 2001 from Bacon & Woodrow, an actuarial consultancy firm based in London, where she was responsible for various consulting assignments for European companies, primarily in the area of embedded value methodology. Ms. Santori also participated in several M&A assignments, and she was involved in various ALM projects for large European groups.

Prior to joining Standard & Poor's, Ms. Santori worked in the Hong Kong branch of Assicurazioni Generali, where she was primarily in charge of the regional coordination of their international pooling arrangement business. In 1997, Ms. Santori moved back to Paris with Generali Finances, where she was in charge of developing ALM for the group's French subsidiaries.

Ms. Santori qualified as a life actuary in Rome in 1994 and joined Towers Perrin in Paris as a junior consultant. Her native tongue is Italian, but she's fluent in French, English and Spanish.

ANDREW D. SMITH, BA

Andrew D. Smith is a partner with Deloitte in London, England. He leads a team of analysts and IT specialists who develop, support and market Deloitte's flagship capital market modeling technology: The Smith Model.

For many years Mr. Smith has been at the forefront of developing stochastic investment models for use in Asset Liability Management and pricing. He has led technical projects on multinational arbitrage-free yield curve models and ways of modeling discontinuous price processes. He has also worked with stochastic models on the liability side, and has experience in modeling such delicate issues as premium cycles, reserving variability, bonus strategies, new business elasticity, frictional costs, option pricing and quantitative operational risk measures.

Mr. Smith has published many papers in insurance, pensions and financial matters. In 1996 he won the Institute of Actuaries' prize for his paper "How Actuaries can use Financial Economics," and another prize in 2002 for his joint paper "Corporate Bond Models." Mr. Smith serves actively on a number of professional working parties. He is a spirited critic of actuarial mumbo jumbo, and is well known for his ruthless debunking of financial myths. He is frequently quoted in the press, and is widely respected as an entertaining and informative conference speaker. Readers of *The Actuary* magazine in 2003 voted Mr. Smith the second greatest British actuary ever.

WHAT SOME OF OUR PARTICIPANTS HAD TO SAY:

"This was by far the best course I have ever attended."
– HONG KONG

"Good coverage of current topics and practices. The contents and the program were demanding and also very rewarding." – TOKYO

"You guys not only thoroughly covered the theoretical concepts, but gave me some step-by-step instructions on how to implement ALM back home at work. Great job - thanks!" – NEW YORK

"Hands-on experience through case studies, in particular the mock ALM committee meeting, brings theoretical knowledge into practice and helps visualize what I will need to tackle in life." – TOKYO

"The staff was fabulous in providing support and guidance. This was a very positive experience." – PHOENIX

"The life analyst now has a better understanding and an arsenal of tools and questions to better analyze the risks of the life insurance companies." – LONDON

"I especially liked the opportunity to participate by doing the applications. The utilities provided are very helpful."
– QUEBEC CITY

"Course material is comprehensive, practical and very useful. Case studies and applications are very useful in cementing ideas." – LONDON

SPONSORS

NEXUS RISK MANAGEMENT INC.

Nexus Risk Management Inc. provides ALM and asset management solutions to the financial services industry. More information about Nexus Risk Management Inc. is available at www.nexusriskmanagement.com.

SOCIETY OF ACTUARIES

The Society of Actuaries is a nonprofit professional society of more than 18,000 members involved in the modeling and management of financial risk and contingent events. The mission of the SOA is to advance actuarial knowledge and enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business and societal problems involving uncertain future events. www.soa.org

STANDARD AND POOR'S

Standard & Poor's is one of the world's preeminent providers of credit ratings. In addition, Standard & Poor's maintains financial-market indices, such as the S&P 500R, and provides a wide range of other products and services designed to help individuals and institutions make better-informed financial decisions with greater confidence.

INTERNATIONAL ACTUARIAL ASSOCIATION

The International Actuarial Association is the worldwide association, regrouping local professional actuarial associations and their individual actuaries. The IAA exists to encourage the development of a global profession, acknowledged as technically competent and professionally reliable, which will ensure the public interest is served. www.actuaries.org

CZECH SOCIETY OF ACTUARIES

The Czech Society of Actuaries was established to promote the development of insurance mathematics in Czech Republic. Its aim is to concentrate intellectual capacities of Czech and Slovak insurance technicians in the interest of insurance and social sciences, as well as to defend the rights of academically educated insurance specialists. www.actuarial.cz

PROGRAM INFORMATION

ON-SITE NEEDS:

- Course delegates are required to bring their own personal laptop computer to be used during the course.
- The computer software should include Microsoft Excel (2000 or later; with macros enabled) and Adobe Acrobat Reader (7.0 or later), which can be downloaded at www.adobe.com.
- The computer must have a compact disc drive.

ACCESS TO FACULTY

In addition to scheduled class time, questions and discussion are encouraged outside of the lectures and practice sessions. Participants will have the opportunity to interact with faculty informally throughout the course.

PROFESSIONAL DEVELOPMENT CREDIT

The SOA has assigned PD credits as follows: Techniques and Practices, 15 credits; Master Class, 6 credits; and Seminar, 8 credits. Visit the SOA Web site (www.soa.org) for more information on PD units.

CFA INSTITUTE CREDIT



This course is registered with CFA Institute as an Approved Provider of professional development programs. This program is eligible for 26.5 PD credit hours as granted by the CFA Institute.

ATTIRE

Business casual attire is appropriate for this seminar.

HOTEL INFORMATION

HOTEL INFORMATION

Corinthia Towers Hotel

Kongresova 1

140 69 Praha 4

Czech Republic

Phone: 420.2611 91 143

Fax: 420.2612 25 045



ROOM RATES (TAXES NOT INCLUDED):

Superior Room:	175 EURO single occupancy 180 EURO double occupancy
Business Floor:	20 EURO supplement
Executive Floor:	40 EURO supplement

CUTOFF DATE: Friday, March 30, 2007

We have arranged for hotel reservations to be made by telephone. To reserve the rate quoted in the brochure, the following procedures should be completed:

- Make your reservations by the cutoff date (Friday, March 30, 2007)
- Use the phone numbers quoted in this brochure
- Identify yourself as part of the Society of Actuaries

Rooms are available at the rate quoted above as long as there are rooms remaining in the Society of Actuaries' block or until the cutoff date of Friday, March 30, 2007. After this date, rooms will be on a space- and rate-available basis.

HOTEL CANCELLATION

A deposit, with a major credit card, equal to one night's stay is required to hold each reservation. This deposit is refundable if notice of cancellation is received 72 hours prior to your scheduled arrival and a cancellation number is obtained. All deposits will be charged at the time the reservation is made. No show reservations will forfeit the full first night's deposit.

EARLY DEPARTURES:

All guests will be asked at check-in to verify their departure date. At that time you may change your departure date without penalty. An early departure fee may be charged to any guest who decides to depart before that verified date.

LOCATION & AIRLINE

The Corinthia Towers Hotel is located across the road from the Prague Congress Center only two metro stops away from the city center and 20 kilometers from the Prague Ruzyne Airport.



REGISTRATION

You may register using three methods:

REGISTER ONLINE (credit card required):

To register online, go to www.soa.org and click on "Register for an Event" under the "Favorite Links" in the lower right hand corner of the homepage.

Registration must be received online **no later than April 20, 2007.**

Payment must be received **by March 16** in order to receive ALM

Essentials free of charge.

REGISTER BY MAIL:

Mail your registration form, which must be received by April 20, along with check payable to:

Society of Actuaries
ALM - Prague
P.O. Box 71293
Chicago, IL 60694

IN PERSON ON SITE

If you are unable to register by April 20, 2007, you may register at the on-site registration desk located at the Corinthia Towers Hotel beginning at 7 a.m., Monday, April 23, 2007.

If you wish to send a wire transfer as payment please e-mail us at wiretransfer@soa.org for specific wire transfer instructions. **Payment in full must accompany your registration.**

REGISTRATION CONFIRMATION

Confirmations are e-mailed upon completion of registration.

CANCELLATION

All cancellations must be made in writing no later than April 9, 2007 to the Customer Care Center (cancel@soa.org) in order to obtain a refund of the registration fee. The Society of Actuaries will refund the registration fee, minus a processing fee of \$500. Refund requests received after the conclusion of the seminar will not be honored. The Society reserves the right to cancel any seminar if conditions warrant. In the event of such cancellations, registration fees will be refunded in full. We are not responsible for any discounted airfares or hotel penalties that an attendee may incur due to cancellation.

ASSET

THE SOCIETY OF ACTUARIES

LIABILITY

NEXUS RISK MANAGEMENT

MANAGEMENT

Techniques and Practices for Insurance and Pensions

CO-SPONSORED WITH STANDARD & POOR'S, THE INTERNATIONAL ACTUARIAL ASSOCIATION AND THE CZECH SOCIETY OF ACTUARIES

CORINTHIA TOWERS HOTEL
PRAGUE, CZECH REPUBLIC
APRIL 23-27, 2007

REGISTRATION FORM

Payment must be made in full in order to register.

Please print:

Preferred Name on Badge _____

First Name _____

Last Name _____

Company _____

Address _____

City/State/Zip _____

Phone _____

Fax _____

E-mail Address _____

I require a special meal: Kosher Vegetarian Fruit Plate

Under the Americans with Disabilities Act, do you require one of these specific aids or services to fully participate in this meeting?

Audio Visual Mobile

Registration Fees Register for *Techniques and Practices* or any package by March 16, 2007 to get bonus ALM Essentials five-week e-learning pre-course. *Payment must be received by March 16.* Fees include all breakfasts, lunches, networking receptions and related course materials.

Check all that apply:

Techniques and Practices (April 23-25)* **\$4,300 USD**

Choose one: Techniques and Practices for Insurance
 Techniques and Practices for Pensions

Master Class (April 25-26) **\$1,450 USD**

Choose one: Master Class Interest Rate Models
 Master Class Dynamic Hedging

ALM Seminar (April 26-27) **\$1,350 USD**

Master Class Package* (April 23-26) SAVE! **\$5,100 USD**

Choose one: Techniques and Practices for Insurance
 Techniques and Practices for Pensions

Choose one: Master Class Interest Rate Models
 Master Class Dynamic Hedging

Full Program Package* (April 23-27) SAVE! **\$5,750 USD**

Choose one: Techniques and Practices for Insurance
 Techniques and Practices for Pensions

Choose one: Master Class Interest Rate Models
 Master Class Dynamic Hedging

Plus: ALM Seminar

* Includes ALM Essentials if payment received by March 16.

Total Enclosed: _____

For registration using a credit card please register online at www.soa.org. Click on "Register for an Event" under the "Favorite Links" in the lower right hand corner of the homepage.