

ASSET LIABILITY MANAGEMENT

THE SOCIETY OF ACTUARIES

NEXUS RISK MANAGEMENT

Techniques and Practices for Insurance and Pensions

CO-SPONSORED WITH STANDARD & POOR'S AND
THE INTERNATIONAL ACTUARIAL ASSOCIATION

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

POINTE SOUTH MOUNTAIN RESORT
PHOENIX, ARIZONA
DECEMBER 3-7, 2007



SOCIETY OF ACTUARIES

**MEET NEW PENSION
CHALLENGES HEAD ON.**

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

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

**ASSET
LIABILITY
MANAGEMENT**

THE SOCIETY OF ACTUARIES
NEXUS RISK MANAGEMENT

Techniques and Practices for Insurance and Pensions

CO-SPONSORED WITH STANDARD & POOR'S AND
THE INTERNATIONAL ACTUARIAL ASSOCIATION

Actuaries
Risk is Opportunity. SM





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 funds, 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 October 29** 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 accounting 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, DECEMBER 3, 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
- 9:20  **Overview of ALM Approaches for Pensions**
J. Gold
- 9:50  **Asset Liability Studies**
A. Meder
- 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**
K. Ravindran
- 14:00  **Value Assets and Liabilities**
C. Gilbert
- 14:30  **Identifying Risks**
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  **Prepare Asset Liability Study**
Pension Faculty
- 17:15  **Apply ALM Techniques**
Pension Faculty
- 18:00 Reception with Faculty/Informal Question and Answer
- 19:30 End

TUESDAY, DECEMBER 4, 2007—DAY 2

- 8:00 Breakfast
- 8:30  **Rebalance Portfolio to Within Risk Limits**
Pension Faculty
- 9:45  **Measure Impact of Change in Interest Rates**
Pension Faculty
- 10:00 Break
- 10:30  **Financial Economics**
C. Gilbert
- 11:00  **Determine Asset Mix Using Efficient Frontier Analysis**
C. Gilbert
- 11:20  **Exotic Derivative Structures**
K. Ravindran
- 11:50  **Binomial Model**
C. Gilbert
- 12:30 Lunch
- 13:30  **LDI Framework**
A. Meder
- 14:15  **Products Offered**
A. Meder
- 14:45  **Risk Reporting and Communication**
Pension Faculty
- 15:30 Break
- 15:45  **Formulate ALM Strategy for Pension Fund**
Pension Faculty
- 17:00 End

KEY

-  Lecture
-  Application
-  Case study
-  Open forum

WEDNESDAY, DECEMBER 5, 2007—DAY 3

- 8:00 Breakfast
- 8:30  **Formulate ALM Strategy for Pension Fund**
Pension Faculty
- 9:30 Break
- 9:45  **Shareholder Value Maximization**
J. Gold
- 10:15  **Implement Shareholder Value Paradigm**
Pension Faculty
- 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, DECEMBER 3, 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**
C. Myers
- 9:50  **ALM Framework Implementation**
C. Gilbert
- 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**
C. Gilbert
- 14:00  **Value Assets and Liabilities**
C. Gilbert
- 14:30  **Identifying Risks**
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**
Faculty
- 17:15  **Formulate ALM Strategies**
Faculty
- 18:00 **Reception with Faculty/Informal Question and Answer**
- 19:30 End

TUESDAY, DECEMBER 4, 2007—DAY 2

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

KEY

-  Lecture
-  Application
-  Case study
-  Open forum

WEDNESDAY, DECEMBER 5, 2007—DAY 3


- 8:00 Breakfast
- 8:30  **Working Session**
C. Gilbert, K. Ravindran
- 9:30 Break
- 9:45  **Participate in Mock ALM Committee Meeting**
C. Gilbert, K. Ravindran
- 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, DECEMBER 5, 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, DECEMBER 6, 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, DECEMBER 5, 2007

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

THURSDAY, DECEMBER 6, 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**
C. Gilbert
- 11:00  **Calculate Interest Rate Risk Exposure**
C. Gilbert
- 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, DECEMBER 6, 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 within 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, DECEMBER 7, 2007

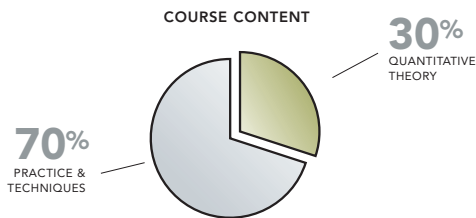
- 8:00 Breakfast
- 8:30 **GENERAL** Market Outlook and Impact
- 9:45 Break, Networking and Informal Question and Answer
- 10:15 **PENSION** Pension Regulation
- INSURANCE** Solvency II/CRO Forum
- 11:30 Lunch and Exhibits
- 13:00 **PENSION** Strategies for Managing Inflation and Longevity Risk
- INSURANCE**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



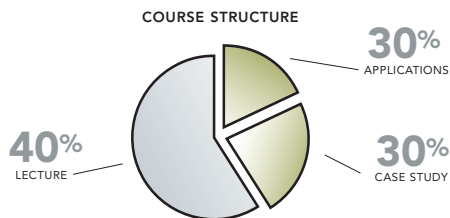
FROM THEORY TO PRACTICE

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.

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 ALM developments 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 the subject of pension funding standards.

Dr. Gold received his Ph.D. from the Wharton School of the University of Pennsylvania.

AARON H. MEDER, FSA, EA

Aaron H. Meder is Head of Asset-Liability Investment Solutions (ALIS), Americas for UBS Global Asset Management. In this role, he is responsible for providing strategic pension advice to clients with defined benefit plans. Additionally, he is an ALIS portfolio manager and is the chairman of the ALIS Investment Committee which is responsible for managing and allocating the entire risk budget of a defined benefit plan in an asset-liability framework.

Prior to joining the firm in 2004, Mr. Meder was a consulting actuary in the HR Services line of business with Towers Perrin. In that role, he managed the completion of actuarial valuations, forecasted future accounting cost results and ERISA minimum/maximum required contributions and developed funding policies for several large corporations' pension and retiree medical plans. Mr. Meder's previous experience also includes work at Watson Wyatt Worldwide as a consulting actuary.

Recent articles written by Mr. Meder include Linking Liabilities to Assets (CFA Institute, Fall 2006, with Renato Staub), Better Liability Benchmarks (Risk and Rewards, 2007), Managing Funding Ratio Risk and Return (Risk and Rewards, 2006), and Slaying the Pension (Deficit) Dragon (UBS White Paper Series, 2005). While at UBS, Mr. Meder also led the development of the iBoxx US Pension Liability indices – investable liability benchmarks designed to help United States corporate defined benefit plans efficiently implement asset-liability investment solutions. Additionally, Mr. Meder is frequently quoted in many of the common pension and investment periodicals.

Aaron received his B.Sc. from the University of Illinois.

CHRISTOPHER MYERS, CFA, MBA

Christopher Myers is an associate director of Enterprise Risk Management in the Insurance Ratings Group at Standard and Poor's. Mr. Myers is part of S&P's new initiative to enhance its analytical ratings framework as it relates to risk management.

Prior to joining Standard & Poor's in 2006, Mr. Myers worked for three years in corporate finance and treasury management at Citigroup where he was involved with analysis surrounding capital management, liquidity risk, interest rate risk and strategy. Prior to his time in banking, Mr. Myers worked for several years as an insurance underwriter and underwriting manager with specialties in casualty and professional liability lines at Chubb Corporation and AIG.

Mr. Myers is a CFA charter holder. He has an MBA from the University of Chicago with dual concentrations in analytical finance and accounting, in addition to a B.A. in economics from the Virginia Military Institute.

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.

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 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

"This is the best actuarial event ever to come to the Czech Republic" – PRAGUE

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

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.

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.

ENROLLED ACTUARY CREDIT

We anticipate that this program will be recommended to meet Enrolled Actuary continuing education requirements. While the sponsors of this program recommend the **ALM Techniques & Practices – Pension Track** to satisfy **750 minutes** of **non-core** continuing education credit and the **ALM Seminar** to satisfy between **300 and 435 minutes** of **non-core** continuing education credit for Enrolled Actuaries, the final decision as to meeting those requirements rests with the Joint Board for the Enrollment of Actuaries. If you would like enrolled actuary credit and want more up-to-date information about current estimates, please contact the Society of Actuaries' Customer Service Center Monday through Friday, 8:00 a.m. to 5:00 p.m. CDT at 888.697.3900 or by e-mail at customerservice@soa.org.

ATTIRE

Business casual attire is appropriate for this seminar.

HOTEL INFORMATION

HOTEL INFORMATION

Pointe South Mountain Resort
7777 South Pointe Parkway
Phoenix, AZ 85044
Phone: 602/438-9000

Toll-free reservations: 877/800-4888



ROOM RATES (TAXES NOT INCLUDED):

Deluxe Rooms: \$169.00 single or double
Plus: \$8 per night resort fee

CUTOFF DATE: Friday, November 9, 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, November 9, 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, November 9, 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 seven (7) days 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

Pointe South Mountain Resort is located on 220 acres at the base of South Mountain Preserve, six miles from Sky Harbor International 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 November 30, 2007**.

Payment must be received **by October 29** in order to receive ALM

Essentials free of charge.

REGISTER BY MAIL:

Mail your registration form, which must be received by November 16, 2007, along with check payable to:

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

IN PERSON ON SITE

If you are unable to register by November 30, 2007, you may register at the on-site registration desk located at the Pointe South Mountain Resort, at 7 a.m., Monday, December 3, 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 November 19, 2007 to the Customer Service 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 AND
THE INTERNATIONAL ACTUARIAL ASSOCIATION

POINTE SOUTH MOUNTAIN RESORT
PHOENIX, ARIZONA
DECEMBER 3-7, 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 October 29, 2007 to get bonus ALM Essentials five-week e-learning pre-course. Payment must be received by October 29. Fees include all breakfasts, lunches, networking receptions and related course materials.

Check all that apply:

Techniques and Practices* (December 3-5) \$4,300 USD

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

Master Class (December 5-6) \$1,450 USD

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

ALM Seminar (December 6-7) \$1,350 USD

Master Class Package* (December 3-6) 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* (December 3-7) 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 October 29.

Total Enclosed: _____

For registration using a credit card, please register online at www.soa.org.