

**European Actuarial Academy**

developing actuaries



Seminar  
**“ALM Developments in Theory and Practice”**  
21<sup>st</sup> – 22<sup>nd</sup> June 2010  
Bern / Switzerland

organised by the European Actuarial Academy GmbH and the Swiss Association of Actuaries SAA (Schweizerische Aktuarvereinigung SAV)

## 1. Introduction

Asset and Liability Management (ALM) is an important ingredient for the strategic decision making of insurance companies. ALM is often associated with ‘the strategic asset allocation’, but it also supports insurance companies on other strategic topics such as solvency risk analysis, the dividend and capital policy, interest rate risk management and the reinsurance policy. Both developments in accounting (IFRS) and solvency regulation (SST, Solvency II) are having a large impact on how insurance companies are looking at the risks in their balance sheet right now.

Closely related to ALM are topics such as liability driven investing, market consistent valuation and economic capital. ALM models have therefore evolved to financial risk management models that can be used for a wide range of topics. In this seminar we will present the concepts of the above models and illustrate the working with examples from practice.

Under the hood of ALM models are economic scenarios for e.g. interest rates curves, inflation and investment returns. As the characteristics of these scenario’s may have a substantial impact on the outcomes of the ALM model, it is important to have a proper understanding of some aspects of economic scenario generation. Therefore we will address the highlights of both real-world and risk neutral scenarios, in order to understand the impact of modelling decisions on the outcomes of the models.

## 2. Target Group

This seminar is open to members of the Schweizerische Aktuarvereinigung, holders of the federal diploma of a pension expert and all candidates to become an actuary or pension expert within Switzerland.

### 3. Purpose and Nature

The seminar is suited for actuaries and investment consultants that are directly or indirectly involved in issues with regard to ALM, interest rate risk management, valuation and pricing, or solvency calculation within insurance companies. The aim of the seminar is to provide a solid background with respect to the concepts of ALM-models and their application to a wide range of topics in the field of financial risk management.

The seminar will be concluded with a computer case in which the participants can apply the acquired knowledge on making the proper ALM decisions for a representative life insurance company.

Participants are advised to bring a laptop.

### 4. Lecturer

**André van Vliet** (1967) studied econometrics at Erasmus University Rotterdam. In 1995 he received a PhD degree in Operations Research for his research on the performance analysis of optimization algorithms. During this PhD period he taught as an assistant professor at the Econometric Institute in Rotterdam and published in several academic journals. Parallel with his academic work, he started his professional career at ORTEC on logistic optimization in 1988. In 2000 he changed his working environment from logistics to finance. At Ortec Finance he headed consulting units on ALM, risk management, performance management and financial engineering. Since 2006 he is head of the business unit Insurance Risk Management.

### 5. Language

The language of the seminar will be English.

### 6. Provisional Programme

#### Monday, 21<sup>st</sup> June 2010

08.40 – 08.55	Registration
08.55 – 09.00	Introduction and welcome
09.00 – 10.30	Introduction <ul style="list-style-type: none"><li>- ALM</li><li>- Economic Capital</li><li>- Solvency II, SST</li><li>- Risk Monitoring</li><li>- Scenarioanalysis approach</li><li>- Multi-view: statutory, regulator, economic</li></ul>
10.30 – 10.45	Break
10.45 – 12.15	Economic scenarios (real world) <ul style="list-style-type: none"><li>- Important properties of economic scenarios</li><li>- Statistical modeling</li><li>- Modeling of interest rates</li><li>- Modeling of asset returns, including alternatives</li><li>- Combining short term and long term scenarios</li></ul>
12.15 – 13.15	Lunch
13.15 – 15.15	Life Insurance <ul style="list-style-type: none"><li>- Fixed cashflows + profit sharing</li></ul>

- Unit-linked policies + guarantees
  - Interest rate risk management, duration, convexity, swaps, swaptions
  - Replicating portfolios, liability driven investing, return-matching
  - Example portfolio construction
  - Fixed versus Dynamic Asset Allocation
  - Perspective of the policy holder
- 15.15 – 15.30 Break
- 15.30 – 17.30 Life Insurance (continued)

## **Tuesday, 22<sup>nd</sup> June 2010**

- 08.55 – 09.00 Opening of second day
- 09.00 – 10.30 Risk neutral models
- Risk neutral methodology
  - Risk neutral scenarios, calibration of models, scenario generation
  - Valuation of embedded options, MCEV, Fair Value
  - Pricing of insurance products
  - Consistency between real world and risk neutral
- 10.30 – 10.45 Break
- 10.45 – 12.15 Non-Life Insurance
- Examples
  - Modeling of insurance risk, bottom-up or top-down
  - Duration matching or not?
  - Reinsurance
- 12.15 – 13.15 Lunch
- 13.15 – 15.15 Solvency risk
- From Solvency I to Solvency II
  - Impact of Solvency II on strategic decision making
  - SST compared to Solvency II
  - Example Unit-Linked product
  - Internal models
- 15.15 – 15.30 Break
- 15.30 – 17.30 Computer case
- Introduction of life insurance case
  - Participants at work with ALM model
  - Evaluation of answers
- 17.30 Concluding remarks and closing of the seminar

## **7. Fees & Registration**

Please register for the seminar as soon as possible because of the expected demand. We recommend registration until 21<sup>st</sup> May 2010. If there are more persons interested in this seminar than places available we will give priority to the registrations having been first to arrive. Please send your registration as soon as possible by using the online registration at [www.actuaries.ch](http://www.actuaries.ch).

Your registration is binding. Cancellation is only possibly up to 21<sup>st</sup> May 2010. If you cancel at a later date, the full seminar fee is due. You may appoint someone who takes your place, but must notify us in advance. SAV has the right to cancel the event if the minimum number of participants is not reached.

We will send you an invoice, please allow a few days for handling. Bank charges are to be borne by the participant.

**Your registration fee is CHF 1'600,--** . Coffee-breaks, lunches and the seminar material are included in the seminar fee. The hotel accommodation is not included in the price and must be booked directly with the hotel.

The registration fee includes the participation on all lectures.

## **8. CPs**

The seminar has been applied for 15 CPs.

## **9. Seminar location**

The seminar will take place at

Kursaal Bern  
Kornhausstr. 3  
3000 Bern 25  
[www.kursaal-bern.ch](http://www.kursaal-bern.ch)  
Tel. 031 339 55 00

Important: If you need a hotel room, please contact [Sekretariat@actuaries.ch](mailto:Sekretariat@actuaries.ch).