

**Invitation to a Course on  
Instruments and Strategies of Asset Allocation**  
with a special focus on market risk for regulatory and internal purposes

24<sup>th</sup> to 27<sup>th</sup> April 2019  
Salzburg University

Lecturers: Dr. Rainer Eichwede  
Head of Financial Controlling  
Bausparkasse Schwäbisch Hall  
Visiting professor at Salzburg University

Wolfgang Herold  
On-Site Inspection and Internal Models of Insurance and Pension  
Companies  
Austrian Financial Market Authority (FMA), Vienna  
Visiting professor at Salzburg University

Dates: Wednesday, 24<sup>th</sup> April 2019, 9.00 – 17.30  
Thursday, 25<sup>th</sup> April 2019, 9.00 – 17.30  
Friday, 26<sup>th</sup> April 2019, 9.00 – 17.30  
Saturday, 27<sup>th</sup> April 2019, 9.00 – 12.30

Contents: The relevant financial and mathematical concepts and the key asset allocation processes are introduced. A major part of the lectures is dedicated to the methods of investment and capital markets analysis, based on the fundamental concepts of performance and risk assessment such as value at risk. Interest sensitive instruments like bonds are by large the biggest asset class for insurance and pension companies, and interest rate risk is not only emerging on the asset side but also in technical provisions. Therefore an in-depth treatment of yield curves, interest rate sensitivity, bond and bond derivatives (futures, swaps, options) pricing and risk assessment as well as portfolio management strategies of fixed income instruments will be provided. Additionally, further risk aspects such as credit and reinvestment risk and its management as well as issues related to the capital requirements under pillar 1 of Solvency II are discussed.

The relevant characteristics of other asset classes such as equity, real estate and alternative investments will be highlighted, together with their individual risk profile and practical issues regarding their treatment within the asset allocation process. A special emphasis will be put on accounting

standards for investments and their impact on profit management. Expert methods, such as portfolio insurance techniques, manager selection or capital markets in actuarial modelling conclude this business oriented part of the lectures. Another part of the course is dedicated to the regulatory requirements of insurance and pension supervision according to the Solvency II and IORP II directive. The investment business related supervisory tools and practices are discussed. The closing session deals with expert topics including an overview of structured products and summarizes the lessons learned for the next financial crisis.

The course covers all aspects of instruments and strategies of asset allocation required to become a fully qualified actuary according to the education syllabus of the International Actuarial Association and the core syllabus of the Actuarial Association of Europe as well as according to the regulations of the Actuarial Association of Austria (AVÖ), which correspond to the regulations of the German Actuarial Association (DAV). The course also meets the requirements by the Austrian Financial Market Authority with respect to the (deputy) appointed actuary (§§ 114 – 116 Austrian Insurance Supervision Act as well as §§ 21d and 21e Austrian Pension Fund Act), the (deputy) head of the actuarial function (§ 113 Austrian Insurance Supervision Act as well as § 21c Austrian Pension Fund Act) and the (deputy) head of the risk management function (§ 112 Austrian Insurance Supervision Act as well as § 21a Austrian Pension Fund Act). For continuing professional development (CPD) the course counts as 21 hours.

The course is suited to all those who want to acquire knowledge of asset allocation. It is also of interest to experienced practitioners. Please find the detailed programme of the course on the following two pages.

Course fees: € 666 (incl. VAT) without hotel accommodation, € 1,138 (incl. VAT) with accommodation from Tuesday to Saturday (4 nights) in the Arcotel Castellani including breakfast. Lunches and coffee breaks are included in the fees for all participants.

Information: For further information, please contact Sarah Lederer by e-mail ([sarah.lederer@sbg.ac.at](mailto:sarah.lederer@sbg.ac.at)) with your telephone number. Your questions will be answered as soon as possible.

Registration: Please send the attached registration form by post or by e-mail ([sarah.lederer@sbg.ac.at](mailto:sarah.lederer@sbg.ac.at)), and arrange for the amount to be transferred (at no cost to the recipient) to the following account before 8<sup>th</sup> March 2019. After this date registration with hotel accommodation is only possible upon request. The registration and payment deadline for participants who do not need accommodation is 29<sup>th</sup> March 2019.

Salzburg Institute of Actuarial Studies (SIAS)  
IBAN: AT79 2040 4000 0001 2021 BIC: SBGSAT2S

Location: Faculty of Science, Lecture Hall 402  
5020 Salzburg, Hellbrunner Straße 34

# Programme

Session 1 daily 9.00 – 10.30

Session 2 daily 11.00 – 12.30

Session 3 daily 14.00 – 15.30

Session 4 daily 16.00 – 17.30

**Wednesday, 24<sup>th</sup> April 2019**

**1 Basic concepts of financial analysis** (*W. Herold*)

- a. Present value
- b. Yield curves
- c. Return and performance measures
- d. Univariate risk measures

**2 Asset allocation processes** (*W. Herold*)

- a. Investment vehicles
- b. Multivariate performance and risk measures
- c. Portfolio theory
- d. Asset selection

**3 Fixed income instruments** (*R. Eichwede*)

- a. Characteristics of interest rate sensitive investments
- b. Overview of instruments
- c. Interpretation and application of yield curves, forward rates
- d. Duration, convexity, sensitivity

**4 Interest rate risk** (*R. Eichwede*)

- a. Interest rate risk for insurance companies, reinvestment risk for life insurance
- b. Interest rate risk within the SCR calculation
- c. Interest rate risk management: futures, swaps, swaptions, caps, floors, CMS
- d. Practical aspects of fixed income investment, liquidity premium

**Thursday, 25<sup>th</sup> April 2019**

**1 Credit risk** (*R. Eichwede*)

- a. Instruments bearing credit risk
- b. Overview of rating models, default probability, credit value at risk
- c. Instruments for credit risk management: indices, CDS, CDS options
- d. Spread and concentration risk within the SCR calculation

**2 Interest rate and credit risk management** (*R. Eichwede*)

- a. Asset liability management
- b. Maturity matching, liquidity planning
- c. Accounting of investments, IFRS
- d. Corporate profit management

- 3 Equities** (*W. Herold*)
- a. Equity analysis, characteristics of equity markets
  - b. Market indices, capital asset pricing model
  - c. Investment strategies
  - d. Equity risk within the SCR calculation

- 4 Market risk models** (*W. Herold*)
- a. Internal market risk models
  - b. Diversification
  - c. Validation
  - d. Reporting, performance and risk measurement

**Friday, 26<sup>th</sup> April 2019**

- 1 Other asset classes** (*R. Eichwede*)
- a. Property, FX
  - b. Private equity, infrastructure
  - c. Commodities, hedge funds
  - d. FX and property risk within the SCR calculation

- 2 Asset allocation strategies** (*W. Herold*)
- a. Benchmark investing vs. total return styles, risk bearing capacity
  - b. Portfolio insurance
  - c. Investment controlling
  - d. Capital market models in actuarial modelling

- 3 Legal framework for asset allocation and investments** (*W. Herold*)
- a. Solvency II and IORP II
  - b. Austrian Insurance Supervision Act 2016 and Investment Directive
  - c. Austrian Pension Fund Act and Risk Management Directive
  - d. Role of FMA

- 4 Supervision of asset management of insurance and pension companies** (*W. Herold*)
- a. Prudent person principle
  - b. Implications of Solvency II and IORP II
  - c. ORSA, ORA und risk management
  - d. On-site and off-site supervision, supervisory review process

**Saturday, 27<sup>th</sup> April 2019**

- 1 Expert topics** (*R. Eichwede*)
- a. Risk management using derivatives
  - b. Options
  - c. Structured products
  - d. Lessons learned for a future financial crisis

- 2 Final discussion / exam preparation** (*R. Eichwede and W. Herold*)