31 May - 03 June 2016
at
ISEG- Lisbon School of Economics
and Management

If you intend to submit a paper for the ASTIN COLLOQUIUM LISBOA 2016, you need to provide a **Synopsis** (using the template on the next page), complete this **Submission Form** and submit both to astincolloquium2016@gmail.com by **Saturday 7 May 2016.** Synopses and submission forms must be sent as MSWord attachments, please do not supply them in the body of an email. You will be advised of the outcome and, if accepted, your abstract will be uploaded to the website.

SUBMISSION FORM

Name: Prof. Dr. Magda Schiegl **Company: University of Applied Sciences Landshut**

Am Lurzenhof 1, D-84036 Landshut

E: **magda.schiegl@haw-landshut.de**

Title of Paper / Presentation / Session to appear in program: **A Model based Analysis of German Interest Rates.**

Author/s:
1. Magda Schiegl **2.**

3. **4.**

What will your final submission be? Presentation and Paper ☐ Presentation Only ■

If selected, what level of knowledge will delegates attending your session require? (please select only) one
☐ No prior knowledge ■ General industry knowledge assumed ☐ Technical/specific industry knowledge assumed

Note: If you are asked to present at ASTIN COLLOQUIUM LISBOA 2016, it will still be necessary for you to register and pay to attend the Colloquium. IAP does not subsidies, discount, pay for, or extend special registration offers for presenters or delegates.

IAP: Instituto dos Atuários Portugueses
Campo Grande 28, 8 C 1700-093 Lisboa
Portugal
TEL: + 351 21 846 38 82
Email: astincolloquium2016@gmail.com
http://www.actuaries.org/lisbon2016/

31 May - 03 June 2016
at
ISEG- Lisbon School of Economics
and Management

ABSTRACT

(TITLE OF PAPER / PRESENTATION TO APPEAR IN PROGRAM) **A Model based Analysis of German Interest Rates.**

(Name of Author/s): **Magda Schiegl**

Key words: (enter up to 8 key words applicable to your abstract / paper / presentation)
Interest rate, stochastic model, CIR, Vasicek, data analysis, risk management

Purpose of your paper: (To assist delegates / readers searching for your paper on the website after the event, please enter a brief description (maximum 220 characters) on the purpose of your paper.)

Abstract: (Place text here using font size Calibri (Body) 11)

Over the last years interest rates decreased continuously in Germany. This development is very crucial and especially demanding for companies dealing with long term investments. For the risk management of interest-rate-sensitive investments stochastic models are used. The standard interest rate models, the Cox-Ingersoll-Ross (CIR) – and the Vasicek – model consist of a mean reverting drift part and a volatility part. The models differ in this second part concerning the volatility dependence on the interest rate's size. The mean reverting level reflects the idea of an "equilibrium" interest rate to be achieved as a stable state in the long run attracting the fluctuating interest rate.

We analyse the German interest data according to these standard models and ask for their relevance and applicability. We investigate the mean reversion level and the volatility of different term rates. The time scaling behaviour of the empirical interest data is compared with that of the calibrated models.

Note: If you are not presenting a paper for this Colloquium, please include as much detail as possible in your Abstract (maximum three pages) to enable delegates to prepare for your session.