

# IAA AFIR Colloquium, 9 – 11 September 2009

Dear Sir or Madam,

Thank you for the opportunity to submit a paper. My suggested talk will be on “Optimization of limit systems for investment risks in accordance with Solvency II and German MaRisk” (as described below in more detail) for the IAA AFIR Colloquium in Munich.

Kind regards

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**Title:** Optimization of limit systems for investment risks in accordance with Solvency II and German MaRisk

**Indication of topic:** Solvency, guarantees and risk capital

**Keywords:** Investment risks, financial modelling concepts, Solvency II, dynamic limit-setting approaches, securitization, portfolio optimization;

**Abstract:**

Based on requirements of Solvency II (e.g. Framework of the Solvency II project on safety measures and its concretion according to § 64a German Insurance Law) -- insurance companies should implement an overall risk limit system. Starting point for the initialization of this system is the entity's risk strategy and the entity's risk bearing capital approach based on economic principles. Regarding life insurance companies the dominating risk category are investment risks. Therefore the limit system should focus on these risks.

In practice we note multiple interactions between the original life insurance business and the investments. Because of these relations the limit system for investment risks cannot be separated from life business risks. There is especially the need to integrate the entity's asset liability management approach in the risk limit system.

The regulatory requirements ask for a consistent integration of a top-down view with a bottom-up risk management perspective in the investment department. To come to an adequate concept the first step is to structure the individual types of risk categories including the corresponding risk management approaches. Hereby it is of highest importance to get clear definitions about the bottom-up and the top-down view in the context of life insurance investment risks and to integrate this in the entities overall solvency control assessment.

The current financial crisis has shown valuation problems and an enormous increase of volatilities in the capital markets never seen before. This makes clear that an ongoing and efficient analysis of these market developments and their impact on strategic and tactical asset allocation, on portfolio optimization and on securitization are key requirements for the management of investment risks. The crisis also highlights the importance of thinking in detail about risk model sensitivities, processes and how to manage the model risk implications.

In this paper we propose an approach called “investment risk solvency cycle” (German: “Regelkreis der Solvenzsteuerung für Kapitalanlagerisiken”) which provides an integrated view on the issues mentioned. This approach is the basis for an optimal design of the corresponding risk limit system. Based on advanced financial modelling concepts we discuss and illustrate the integration of (market-sensitive) dynamic limit-setting approaches, bottom-up and top-down risk management concepts and ALM requirements.