

RISK MANAGEMENT SECTION RESEARCH TOPICS REQUEST FOR PROPOSALS

I. Background

The Joint CAS/CIA/SOA Risk Management Section Research Team was formed in 2005 to pursue research of interest to risk management professionals. Since its founding, the team has initiated and completed several research projects that have helped to propel Risk Management knowledge forward and set the framework for future efforts. In keeping with its desire to add to the risk management body of knowledge, the team is interested this year in receiving proposals for research on a number of specific topics. The specific topics are enumerated in the Research Objective section of this document with the intention to formally initiate projects on 3–4 of the topics this year.

II. Research Objective

To advance knowledge in risk management, the Joint CAS/CIA/SOA Risk Management Team would like to receive proposals related to the following topics. The description of each of the topics has deliberately been written to be brief and open-ended in order to give potential proposers sufficient latitude in the development of the proposal:

1. An analysis and/or proposals of methodologies that can be used for validating models and providing effective model risk management. Considerations in addition to model validation may include sound development, implementation, and appropriate use, governance, and control mechanisms, board and senior management oversight, policies, and an appropriate incentive and organizational structure.
2. A research paper on biological/medical/environmental trends which could cause higher levels of mortality/morbidity. The scope should be global and focus on migration of certain diseases which can be debilitating or deadly for humans, including how these diseases migrate from country to country and continent to continent. Quantification of the elevated levels of mortality and morbidity would also be useful in terms of how it can be applied for an ERM program and stress testing.
3. An investigation of how to improve stochastic modeling methods, specifically in a VaR framework. Issues include limitations caused by current modeling methods that only allow for a static correlation matrix to be used and current stochastic models for stocks and commodities that do not robustly simulate market crashes.
4. An exploration of the major sources of practical challenges in hedging exotic insurance products and corresponding potential solutions. The research scope should also include discussions on the relevance of implied volatilities in the economic value calculation of separate account products.
5. A paper that applies fuzzy logic to assess various risks such as operational, reputational and others.

6. An examination of risks related to remaining in a sustained low interest environment and its inherent effects on the efficacy and viability of insurance and financial products

Proposals may be submitted on one or more topics. As mentioned in the Background section, it is anticipated that up to 3–4 proposals will be selected this year. Depending on the response, specific proposals may be deferred until next year. In such cases, proposers will be notified as soon as possible.

III. Proposal

To facilitate the evaluation of proposals, the following information should be submitted:

- A. Resumes of the researcher(s), including any graduate student(s) expected to participate, indicating how their background, education and experience bear on their qualifications to undertake the research. If more than one researcher is involved, a single individual should be designated as the lead researcher and primary contact. The person submitting the proposal must be authorized to speak on behalf of all the researchers as well as for the firm or institution on whose behalf the proposal is submitted.
- B. An outline of the approach to be used, emphasizing issues that require special consideration. Details should be given regarding the techniques to be used, collateral material to be consulted, and possible limitations of the analysis.
- C. Cost estimates for the research, including computer time, salaries, report preparation, research costs, etc. Such estimates can be in the form of hourly rates, but in such cases, time estimates should also be included. Any guarantees as to total cost should be given and will be considered in the evaluation of the proposal. While cost will be a factor in the evaluation of the proposal, it will not necessarily be the decisive factor.
- D. A schedule for completion of the research, identifying key dates or time frames for research completion and report submissions.
- E. Ideas regarding the form and distribution of the final report, both for immediate release and for permanent reference (e.g., submission to *North American Actuarial Journal*, SOA Monograph Series, CD ROM).
- F. Other related factors that give evidence of a proposer's capabilities to perform in a superior fashion should be detailed.

IV. Selection Process

The CAS/CIA/SOA Risk Management Research Team is responsible for the selection of the proposals to be funded. Input from other knowledgeable individuals also may be sought, but the team will make the final decision. The SOA's Research Actuary will

provide staff actuarial support. A Project Oversight Group (POG) will be appointed to oversee each project that is initiated.

V. Questions

Any questions regarding this RFP should be directed by fax, or e-mail to: Steven Siegel, SOA Research Actuary (Fax: 847-273-8578; e-mail: ssiegel@soa.org).

VI. Notification of Intention to Submit Proposal

If you intend to submit a proposal, please send written notification by September 15, 2012 to Barb Scott by e-mail (bscott@soa.org) or FAX (847-273-8592).

VII. Submission of Proposal

Please e-mail a copy of the proposal to: Barb Scott at bscott@soa.org.

Proposals must be received no later than October 1, 2012. It is anticipated that all researchers who have submitted proposals will be informed of the status of their proposal no later than October 31, 2007.

Note: Proposals are considered confidential and proprietary.

VIII. Conditions

The CAS/CIA/SOA Risk Management Research Team reserves the right to not award a contract for these research topics. Reasons for not awarding a contract could include, but are not limited to, a lack of acceptable proposals or a finding that insufficient funds are available to proceed. The CAS/CIA/SOA also reserves the right to redirect the projects as is deemed advisable. The CAS/CIA/SOA intends to copyright and publish the results of this research. The research will be considered work-for-hire and all rights thereto belong to CAS/CIA/SOA. However, appropriate credit will be given to the researcher(s).