AMERICAN ACADEMY *of* ACTUARIES

To: Alan Seeley, Chair of the NAIC Capital Adequacy (E) Task Force Solvency Modernization Initiative Subgroup

From: American Academy of Actuaries

Subject: Request for Assistance

Date: October 1, 2010

Dear Chairman Seeley:

On behalf of the American Academy of Actuaries,[1] I wish to inform you that we have had the opportunity to review your September 15 request for assistance on risk-based capital (RBC) issues. Our review takes into account the work that is already underway in our practice councils' RBC committees and subgroups, the probable time required to do a proficient review of the subjects and the appropriateness of the Academy undertaking the project at this time. Our responses to each of the components of your request are provided below.

Identifying and evaluating risks that are missing from the current RBC formulas (e.g., catastrophe risk, operational risk, various off-balance sheet risks).

Several Academy committees are actively studying aspects of this undertaking and work is currently in progress. We believe we could have an initial report identifying our views on missing risks and provide our recommendations on whether the RBC formulas should be altered to include them by December 31, 2010. Our report will also include a discussion of risk mitigation practices and the extent those practices are reflected in the determination of RBC. It is very likely however, that making provision for some of the missing risks within the RBC formula might not be appropriate, as these risks may have been intentionally excluded from RBC due to materiality, or may be better monitored through other regulatory means such as an internal solvency report or other governance methods.

We realize that the December 31, 2010 date is later than you have asked for a response on this study. While we will move as quickly as possible on this work, we think that meeting the

[1] The American Academy of Actuaries is a 17,000-member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

proposed November 30 date could adversely affect the quality of our work and its ultimate value to you.

Improving the correlation/covariance methodologies used in RBC, including whether to produce similar or different correlation/covariance methods for P&C, Life, and Health.

The Academy's Property & Casualty RBC Committee is working on approaches to improve correlation and general risk dependency methodology in RBC and has also requested additional assistance from the Casualty Actuarial Society in researching this topic. The Academy's Health Solvency Work Group, if requested, will continue to work with the NAIC on the issue of covariance calculation methodology. The Academy's Life Capital Adequacy Subcommittee (LCAS) must decline this portion of the CADTF's request. Members of the LCAS have been involved with correlation risk research in the past; however, our research efforts were not fruitful. While we agree that correlation within the RBC formula is an area in need of further study, we cannot commit to completing work with any specific deadline, given the current state of research and LCAS resources.

Estimating, if possible, the safety levels underlying our current RBC methodologies

We have discussed this task both at our earlier meetings and in subsequent conversations. We can provide an explanation of the safety level calibration underlying the individual risk factors within the current formulas. We can also provide an explanation of the ***intended*** or expected safety level for RBC in aggregate for the original Life, Health and P&C RBC formulas. We can provide this information, to the extent described here, completed by the end of this year. We recognize that the work described above falls short of providing an explicit measure of the aggregate safety level underlying the current formula. In our judgment the theoretical overall safety level cannot be precisely articulated for the current RBC framework.

In addition to documenting the mathematical foundation, we offer a suggestion for estimating the calibration level of the current RBC formulas based on a sampling of actual company results. We suggest a practical approach that may help approximate the aggregate safety levels implied by the current formulas. Several US companies have internal models with the functionality to measure risk and evaluate capital needs under different methodologies. The regulators could ask the companies so equipped to evaluate how their specified RBC levels compare to results from their company internal models. Such information from a sufficient number of companies might be useful in approximating underlying safety levels of the current RBC formula in today's economic environment. We caution that this approximation will likely be based on more highly-capitalized companies and would only be relevant to a specific company's risk exposures. Nevertheless, even with these shortcomings of such an empirical analysis, we do think this approach may provide some useful insights to assist with your group's objectives.

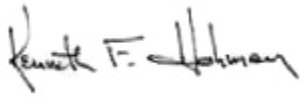
In conjunction with the proposal of a correlation methodology, it would be helpful if the Academy could propose specific time horizons, safety levels and risk metrics for RBC.

This is a request on which we respectfully request revision. As stated in your letter, this is not a proper role for the Academy; rather it's a role that the regulators should undertake. However, if your request is to inform the NAIC as to alternatives for structuring time horizons, safety levels

and risk metrics, then the Academy can provide independent and objective actuarial information, analysis, and education to assist you, including pros and cons of various alternatives. But we require additional clarification from you on how to approach this topic in a manageable fashion before we can inform you of our capabilities on this aspect of your project.

We would be glad to discuss this further with you at the NAIC meeting in Orlando. Representatives from each of our practice councils will be present to answer any questions you have.

Sincerely,



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