



## AMERICAN ACADEMY *of* ACTUARIES

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June 11, 2010

Lou Felice  
Chairperson, Capital Adequacy Task Force  
National Association of Insurance Commissioners  
2301 McGee Street, Suite 800  
Kansas City, MO 64108-2662

Dear Mr. Felice:

The American Academy of Actuaries'<sup>1</sup> Health Solvency Work Group appreciates the opportunity to respond to its charge, given by the National Association of Insurance Commissioners' (NAIC) Capital Adequacy Task Force, which has asked our group to evaluate the current health risk-based capital covariance formula calculation for potential changes to the calculation or methodology.

The health risk-based capital (HRBC) formula quantifies five separate risks:

- H0-Asset risk for affiliates with RBC;
- H1-Asset risk for others;
- H2-Underwriting risk;
- H3-Credit risk;
- H4-Business risk.

After each individual risk is calculated, the RBC is calculated as  $H0 + \text{square root}(H1+H2+H3+H4)$ . The effect of using the covariance for the H1 to H4 risks is that the RBC is less than it would be if the risks were all added together.

The covariance formula is based on the assumption that the risks under the square root are independent of each other. While we believe that some risks may be positively correlated and others may be negatively correlated, without further research we do not know the extent to which they are correlated.

Our group discussed how we could determine the relative correlation of the asset risks, insurance coverage risks, and expense risks of each company. We believe that it is

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<sup>1</sup> The American Academy of Actuaries is a professional association of over 16,000 members, whose mission is to serve public policymakers 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.

possible to quantify these risks given sufficient time and data. This would be a large project, however, taking in excess of a year to complete.

We also believe that fine-tuning the covariance formula is more accurate. Based on the actual correlation between the risks, it would not significantly change the relative RBC of companies, which regulators may use to prioritize their efforts, or move companies into a regulatory-action level in any significant way. In fact, if changing the covariance were to significantly affect those companies that fall into a regulatory-action level, it would probably be necessary to recalibrate the formula.

It is possible to test the impact of having no covariance or limited covariance on the RBC of companies filing the HRBC formula using the NAIC data. That may provide an indication of the importance of pursuing this project.

If you have any questions regarding our comments, please contact Tim Mahony, the Academy's state health policy analyst, at 202.223.8196 or [Mahony@actuary.org](mailto:Mahony@actuary.org).

Sincerely,

Donna Novak, MAAA, FCA  
Chairperson  
Health Solvency Work Group