TO: NAIC Life Risk-Based Capital Working Group
FROM: American Academy of Actuaries Life Risk-Based Capital Task Force
DATE: December 1998
RE: Summary: Covariance Adjustment for Common Stock Proposal

The following is a brief chronology of the actions taken by the American Academy of Actuaries[1] Life RBC Task Force at the request of the NAIC's Life RBC Working Group (WG) with regard to the treatment of unaffiliated common stock in the life formula.

March 1997: NAIC Risk-Based Capital Task Force approves a charge to the Life RBC WG to conduct study comparing assumptions regarding treatment of common stock in P/C and Life formulas, consider changes to harmonize the formulae, and research impacts. Life RBC WG charges the Academy to conduct study.

December 1997: The Academy presents its final recommendation to Life RBC WG. Based on a review of the historical performance of common stock, the Academy recommends keeping the current common stock charge of 30% for life insurer, but changing the treatment of common stock in covariance formula to treat the common stock risk as being independent of the other types of asset risk, assuming the simplified model of either a perfect correlation, or independence.

March and June 1998: The Academy prepares and presents numerous responses to questions from the Life RBC WG Chair on data and methodology of study. One question concerns various adjustments to the calculation of the correlation between common stock and bond defaults to account for the lag between movements in common stock and changes in bond default rates. While all of the adjustments result in correlations that are closer to 0 than to 1, in certain versions the measured correlation is close to .5.

September 1998: The Academy presents an analysis performed at the Life RBC WG's request on the effect of using a formula premised upon a partial correlation between common stock and other types of asset risk. The Academy's recommendation is that there is no theoretical obstacle to using partial correlation in the RBC formula. However, the Task Force recommends that, if partial correlation is incorporated into the formula, then it should be incorporated systematically for all types of risk. The Academy also observes that a partial correlation change would result in a larger reduction in risk-based capital requirements then the change recommended in December

[1]The American Academy of Actuaries is the public policy organization for actuaries of all specialties within the United States. In addition to setting qualification standards and standards of actuarial practice, a major purpose of the Academy is to act as the public information organization for the profession. The Academy is nonpartisan and assists the public policy process through the presentation of clear actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, regulators and congressional staff, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification, and practice, and the Code of Professional Conduct for all actuaries practicing in the United States.

1997, which adhered to the 0-1 framework.

CONCLUSION: The Academy Task Force continues to recommend that the Life RBC WG adopt a change to the formula which would treat the risk of common stock of nonaffiliates and affiliated as independent of other types of asset risk. Such a change would more accurately reflect the benefits of risk diversification and would remove an inappropriate disincentive from the RBC formula.

Studies conducted on the impact of the change showed considerable variation between companies depending on the level of diversification within each company's portfolio. For the life insurance industry in aggregate the proposed change for unaffiliated common stock will result in an increase in the RBC ratio of 28 points. The proposed change for affiliated non-insurers will have a smaller but as yet undetermined effect. The study showed a more modest impact of about 3 points on the RBC ratio for companies who are currently under the 125% threshold. It is reasonable to presume that such companies' investment decisions are more likely to be motivated by RBC results, and therefore the relatively small amount of impact on their results is a likely consequence of the inappropriate treatment of common stock in the current formula.

The NAIC Life RBC WG has considered delaying action on a change in the correlation assumptions between common stock and other investments until the project to implement changes in the interest rate risk factor is completed.