Property/Casualty Insurer Economic Capital Using a VaR Model

Thomas Conway, Principal
Mark McCluskey, Actuarial Analyst

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Abstract

The purpose of this paper is to build a bridge between the traditional methods of looking at financial risk and insurance risk. Currently, many regulatory and internal company models are attempting to combine insurance risk into a value-at-risk (VaR) modeling structure. VaR models view insurance-related risk differently than the traditional actuarial models since risk is defined as the one-year fluctuation in market value of insurance liabilities.

The paper starts by explaining the concepts behind VaR models of economic capital used in banking. Differences between actuarial and financial views of risk are reviewed and explained. The paper concludes with proposing, developing and parameterizing a true VaR model of insurance loss reserve risk which combines several lines of business.