A Multi-Stakeholder Approach to Capital Adequacy

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Abstract

This paper is Part 1 of a two-part submission. Part 2, "An Alternative Approach to Capital Allocation," discusses using risk-replicating techniques that directly calculate the cost of capital. Such techniques can be used as a substitute for capital allocation.

This paper, Part 1, expands upon current capital analysis by introducing a practical approach that considers the objectives of all stakeholders of an insurance company in setting appropriate capital targets. Various stakeholders have differing objectives and therefore can define "risk" and "capital adequacy" differently; some views are more restrictive than others. In fact, some stakeholders' capital requirements are related to the "ability of a company to thrive" rather than the "ability of a company to meet obligations." The optimal level of capital will be different for policyholders, shareholders, management, rating agencies and regulators. These broader definitions of capital adequacy may be expressed by different key financial measures, risk thresholds and time horizons.

Economic capital approaches produce single indications of capital adequacy by applying a single solvency-based risk threshold to a short-time-horizon economic capital measure. This might not represent how all stakeholders view "risk" and "capital adequacy." In consideration of all stakeholder objectives, the proposed "multi-stakeholder approach" therefore produces capital indications across various key financial measures, time horizons and risk tolerances. The approach results in a flexible decision-making framework for the capital management process. This framework can be applied beyond the insurance industry to any industry where there are multiple stakeholders with divergent views on capitalization targets.

In addition, the paper introduces a technique for estimating capital adequacy that is based on mapping stochastic distributions of regulatory and rating agency capital measures to observable financial rating transition matrices. This "Financial Rating Risk Replication" technique estimates capital adequacy by relating the probability of a regulatory or rating agency capital measure falling below a target "risk" threshold to the historical probability of a financial rating migrating to an equivalent "risk" level. Unlike many risk tolerance thresholds applied to economic capital measures, the risk thresholds used in this technique are based on observable information.[1]

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