



AMERICAN ACADEMY *of* ACTUARIES

Interim Report of the Joint Risk-Based Capital Work Group
To the
Ad Hoc Subgroup of the NAIC Risk-Based Capital (E) Task Force
Anaheim — December 2003

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This report was prepared by the Joint Risk-Based Capital Work Group of the Academy's Solvency and Risk Management Task Force.

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Introduction

In September 2003, the Academy's Joint Risk-Based Capital Work Group accepted the following charge from the Ad Hoc Subgroup of the NAIC's Risk-Based Capital Task Force:

“Provide recommendations regarding possible trend test(s) for P&C RBC and for Health RBC and provide recommendations regarding any changes to the Life RBC trend test. Any trend test should strive to provide regulatory action level reporting prior to a company entering an action level which may be based on a significant deterioration in RBC ratios. Considerations and support should be provided for recommendations made.”

The purpose of this interim report is to provide some initial qualitative observations regarding this charge and raise some areas where we would be appreciative of additional guidance.

Trend Test Objectives

Based on our discussions to date, we would like to convey for your review our understanding of the objectives of a trend test. Having as clear as possible an understanding of the regulatory objectives will provide us with a better sense of how to assess the success or failure of various trend test proposals.

Our understanding is that the trend test's primary goal is to serve as an early detection mechanism for those companies that are at substantial risk of falling below the 200% Company Action Level threshold in the short-term future, e.g. within the next year.

In order to assess a potential trend test whose primary intended purpose is as an early detection mechanism, we believe that consideration needs to be given to the level of both “false positives” — companies flagged by the trend test that actually have a very low near-term risk of falling below the 200% level — and “false negatives” — companies not flagged by the trend test that actually have a substantial near-term risk of falling below the 200% level. While it may not be possible to design a trend test having a suitably low level of both false positive and false negatives, it seems likely that such a test, if it exists, might be relatively complex in form.

Another fundamental assessment metric is whether the companies identified by the proposed trend test are substantially more likely to see future deterioration in financial condition than other companies having a similar RBC ratio (i.e., ratio of Total Adjusted Capital to Authorized Control Level RBC). For example, say that 3% of the companies in a given RBC ratio range have historically fallen below the Company Action Level within the next year, but that when we narrow our focus to the companies in that same range that are flagged by a proposed trend test, the proportion of companies falling below the Company Action Level in the next year increases from 3% to 10%. In this case, the trend test may provide significant information of use to solvency regulators, even though 90% of the companies flagged are “false positives”. However, if the proposed trend test only managed to increase this proportion from 3% to 4%, then the expenditure of regulatory and company resources associated with the trend test would not be justified by actuarial analysis.

Qualitatively, it seems plausible that industry-specific factors may affect the ability to design a trend test satisfying the early detection mechanism objective. For example, within the P&C industry, factors such as catastrophes and adverse reserve development may make it difficult to construct a trend test that has a low level of false negatives without having an unacceptably high level of false positives. These factors may be less troublesome within the Life or Health industries.

Note that we see the early detection mechanism objective as being distinct from another plausible regulatory objective, namely to expand the universe of companies that are subject to some form of regulatory solvency monitoring. Obviously these goals are not mutually exclusive. A risk-based capital trend test designed to function as an early detection mechanism will subject additional companies to some form of solvency monitoring. Conversely, a set of revised financial solvency scoring criteria designed to expand the scope of solvency monitoring will naturally sweep in some companies that are at risk of falling into the RBC action levels. As a committee of the Academy, it is appropriate for our role to be limited to the attempt to develop tools that improve the likelihood of identifying troubled insurers. It is strictly a regulatory function to determine whether required solvency and capital levels should be raised more generally, independent of any demonstration of increased solvency risk.

Trend Test Consequences

In assessing the extent to which false positives under a proposed trend test design should be of concern, it would be beneficial to understand the regulatory intent on the consequences of triggering the trend test.

We conjecture three alternatives for the regulatory intent here.

The first possibility is that triggering the trend test would subject the reporting entity to the Company Action Level. This is currently the case under the Life trend test. In this case, failing the trend test triggers very significant financial and non-financial costs for the company, which makes the issue of false positives very significant.

The second possibility is that triggering the trend test would subject the reporting entity to a new fifth regulatory level, which for lack of a better term we have been calling the “Company Notification Level”. This would presumably involve some form of recognition by the reporting entity that it is in danger of falling beneath the Company Action Level, but would not involve the immediate filing of a solvency action plan. Depending on what regulatory and company actions are required at this level, the question of false positives may be less significant for this possibility.

The third possibility is that triggering the trend test would not have any formal regulatory consequences. Such a scenario would be informative and could be used by the regulator to request further information or action(s) in individual company situations. This is similar to the role of the current tax sensitivity test in Life RBC, or to the role of the various action levels in the many states that have not yet adopted the Health Organizations RBC Model Act. In this case, false positives would be less significant and more weight in test calibration could be given to avoiding false negatives.

Trend Test Formats & Relevant Factors

As we have indicated previously, we intend to explore a variety of alternative formats for the trend test and we hope to use historical data provided by the NAIC as a means of assessing the extent to which various alternatives accomplish the desired objectives.

One area in particular that we intend to explore is the impact of exogenous influences on the reporting entity’s Total Adjusted Capital, both in terms of capital outflows — dividends to stockholders, or surplus note redemption — and capital inflows — contributions from stockholders, or surplus note issuance.

These capital structure changes are expected to be relevant to our work in two distinct ways.

First, in using historical data to estimate the frequency of false positives and false negatives associated with a specific trend test proposal, it may be desirable to adjust for the impact of these events. For

example, consider a company that would have triggered the trend test in 2001, and had an RBC ratio above 200% in 2002, but whose RBC ratio would have dipped below 200% in 2002 were it not for the fact that it issued a new surplus note during 2002. This circumstance should probably not be viewed as a presumptive 'false positive' for the trend test, since the company was demonstrably at risk of falling into the Company Action Level but took measures to avoid that occurrence.

Second, we may want to take these circumstances into account directly within the design of the trend test. For example, consider two companies, each of whose RBC ratio fell from 325% in 2001 to 250% in 2002, but where one company had made a significant dividend payment to its parent while the other did not. An optimal trend test framework would probably treat these two companies differently: The company that did not pay a dividend is presumably at greater risk of falling below 200% in 2003 than the company that did, since the deterioration in its RBC ratio may be attributable to some influence that may well be continuing.

Another area for exploration might be the concept of sensitivity testing relative to the levels of actuarial reserves. This type of testing would evaluate the impact of underestimates of the liabilities contemplated in such a reserve. The measure used might represent a provision for underestimation in the liabilities which would represent the probability of a company falling to action level status.

Next Steps

We will continue to pursue our charge, with a focus on developing and testing various trend test designs. We will also be coordinating our work group's efforts with those of the Academy's P&C Risk-Based Capital Committee, which has been pursuing related work on issues specific to the P&C industry. We plan on reporting on our progress at the March 2004 NAIC meeting.