The Evolution of Capital Calculation

Chris Britton, Vice President, Economic Capital for Transamerica Reinsurance, recently interviewed Prakash Shimpi, Enterprise Risk Management (ERM) Practice Leader for Towers Perrin. Chris and Prakash discussed how both business and regulatory incentives are driving the move to an economic basis for capital measurement. As with principles-based regulation, economic capital should more closely reflect the overall risk that a company undertakes. And, Prakash suggests, more interest and pressure from stakeholders should be expected in the future as companies have to justify their risk retention on an economic basis.

Prakash joined Towers Perrin in 2004 to lead that firm’s study of enterprise risk management. Prior to joining Towers Perrin, he held several executive positions in the reinsurance and investment banking industries. He holds a Bachelors of Science in Economics & Statistics and a Masters of Science in Operational Research from the London School of Economics and an MBA in Finance and International Business from the University of Chicago.

Chris Britton: Economic capital is receiving increased interest from financial services companies, regulators and ratings agencies. What do you think is driving this issue?

Prakash Shimpi: I think using a metric like economic capital just makes good business sense and that is the primary driver. But regulators and rating agencies want proof that companies assess all of their risks in a systematic fashion and that they use this information in the day-to-day management of their business.

Our ERM survey asked specific questions on how companies use economic capital. The three key responses were: allocating capital across business lines, measuring performance and making strategic decisions. Ratings agencies and regulatory concerns come lower in the listing. Still, I wouldn’t discount their impact on the discussion.

CB: How do you think EC will ultimately affect the life insurance industry?

PS: Understanding how much capital is really required to support your business is key. I think it’s important to be asking: How do you price appropriately given capital needs? Is capital allocated effectively relative to the risks of the business? What are the cost-benefits of reinsurance? Decisions based on such questions benefit from having an EC focus.
**CB:** Does this benefit just the large insurers or the whole industry?

PS: I’d hope it benefits the whole industry because it brings a certain level of understanding of the sophistication needed to be engaged in certain types of business. A company should not be in a business line if it lacks the resources to do the analysis required for that line’s complex products. They wouldn’t be doing themselves, their shareholders or stakeholders any favors.

**CB:** What would you say is the difference between EC and regulatory or ratings agency capital?

PS: Regulators view capital from the standpoint of solvency: The more capital you hold against your liabilities the better. And ratings agencies look at the balance more from a debt holder’s or an analyst’s perspective.

In contrast, companies must view capital in terms of running their business effectively as viewed from the shareholder’s perspective. A shareholder might say: “Hold on a second. I don’t want to put in more capital than I need to because I’m not making the returns on it.” They look at ratings agency and regulatory capital – and accounting capital, for that matter – as boundaries beyond which they cannot stray, yet within those constraints they must look at the underlying economics of the business.

So regulators’ (and ratings agencies’) analysis is less granular than that of the company; thus, you would expect to see differences.

**CB:** When would you expect the varied EC methodologies to be standardized to a degree to allow reasonable comparisons between companies on an economic capital basis?

PS: We’re far from that today. More companies today are simplifying steps in calculating economic capital, recognizing that there are limitations on accuracy yet comfortable if they’re in the right order of magnitude. So the methodologies that are out there today are not finalized for anyone.

And I’m not sure how much convergence we’ll see. For example, a company with life insurance products with embedded options and guarantees better have robust models that can value these options and consider how they develop over time. In contrast, a business offering simpler products might not need models much different from those used today. So I think it’s less a convergence issue than applying the right principles to your calculations consistently.

**CB:** Banks have already started publicly reporting their economic capital numbers; will insurers follow suit?

PS: We’re starting to see that already.

**CB:** How do you think the Street interprets these numbers?

PS: Presently, equity analysts can look at a ratings agency model and say, “OK, I believe that because I know what adjustments to make. But if I look at an economic model I really have to assess the management team.”

If I were an equity analyst, I’d ask the insurer, “So what? What are you going to do with this information? Will you be writing more of a given business line? Will you be increasing your share buybacks? Will you reinsure more?”

The credibility that analysts will attach to EC figures depends on the management team’s answers to such questions.

**CB:** How do you think the life insurance industry compares to other financial services sectors in developing and implementing economic capital models?

PS: Larger banks have the capability to build economic capital models, apply them and conduct best practices. Medium- to small-size banks might not necessarily have all of the resources and would rely on the broad-brush approach that Basel might give them.

Global P&C insurers look at economic capital in order to determine the appropriate amount of capital to hold against catastrophic loss. Over the last decade or so they have continuously refined their approaches. Like banks, P&C firms with more resources to commit to analysis tend to be further along the curve. But we see the midsize and some smaller firms embarking on this journey as well.

By and large, I think the life insurance industry is no different. You could put the
industry leaders toe-to-toe with the top banks and P&C companies and see high-level similarities among all three.

CB: When do you expect Solvency II to be ready for implementation in Europe?

PS: I think most companies anticipate being Solvency II compliant by 2010, but that’s not concrete. The general response from the industry has been, “Nice, but give us time.” Still, companies are already anticipating what the final regulation will look like and incorporating necessary changes in the areas that Solvency II will focus on.

CB: What are US insurers taking from all of this?

PS: I think Solvency II is being watched very closely here. The impact in the US is highly visible because several large players in the US market have either large European parents and already fall under Solvency II, or they’re US companies that have a European operation and therefore fall under this as well. All the affected multinational companies are fully aware of this, watching developments and making plans accordingly. For others, the question is how US rules could change in response to Solvency II.

CB: Will the implementation of EC standards help the insurance industry with its integration into the capital markets?

PS: We’re looking at the use of capital markets to manage the risks inherent in insurance products. And when we drill down the real question is: How can investors participate in risks in the insurance industry?

Conventionally, investors have been confined to taking a debt or equity stake in insurers. What’s evolved over the last decade, though, is investors’ ability to assume the pure risk separate from the general management of the insurance enterprise – other than the underwriting decisions, of course.

A broader set of insurance categories is coming into play. Over the last five years or so, life insurance-related securitizations have taken off, whether it is regulatory-driven – because of Triple X, AXXX, those kinds of things – or catastrophic mortality.

CB: Do you see a role for economic capital in helping the industry go down this path?

PS: It’s hard to understand the pros and cons of these different choices in the absence of economic capital. How do you tell whether a securitization has improved or reduced a company’s risk and capital position? In fact, moving risk off of the balance sheet and doing so for a certain price so you can get someone else’s cash to fund it requires an economic view. Without an economic view it’s hard to make a case for the value created through such deals.

CB: How do you see economic capital affecting product development going forward?

PS: I think EC already plays a role. Certainly one of the ambitions is to use economic capital more in product pricing and product management. We already see some of that on the P&C side to an extent.

CB: In developing an economic capital program, what is the most important factor to consider?

PS: There are a number of decision criteria. For example: What is the scope of risk under consideration? You want a comprehensive assessment of your risk portfolio; do you have all the information you need?

I often hear that companies manage financial risk and insurance risk really well, but they can’t do operational risk. This begs the question: If you don’t have that capability, aren’t you missing something?

CB: Is there any idea of the estimated cost of implementing and maintaining a system such as economic capital?

PS: It’s not cheap. There are a couple of different elements to consider.

Can you do it yourself because you already have most of the tools and capabilities there? Do you bring in some outside advisors to build something for you? Are these capabilities useful across the firm so you can spread the fixed costs across a number of different applications?
Lastly, we ask our clients to think hard about this one question: Do you need to have precision or do you need to have completeness? Right now, I think completeness is the answer. We can build a complete model in a matter of months, but fine tuning can take a number of years.

**CB: What role can reinsurers play in helping direct companies manage their capital requirements?**

PS: Reinsurance is an alternative to debt and equity that is available to insurance companies. We take it for granted in insurance, yet analysts outside the industry are accustomed to thinking about leverage as strictly between debt and equity and miss the reinsurance component.

It's obvious to me that you should take an economic view to optimize your reinsurance decision. Because the trade-off is: What is the cost-of-capital implication of reinsurance relative to holding my own debt or equity against the risk?

Think of reinsurance as a triggered line of credit. The trigger is the insurable event. So the role of reinsurance for a direct company is risk and capital management. And that, I believe, is the real story behind reinsurance.

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When life insurance companies were offering “plain vanilla” products, rules-based methodologies for calculating capital and reserve levels seemed reasonable. However, with the emergence of more complex products, the old rules are no longer appropriate.

We see Solvency II in Europe and related changes in American regulations as positive developments. Prescriptive rules are transient, and principles-based regulations are persistent. Business decisions in a rules-based regime run the risk of being invalidated with every change in the guidelines. Further, any business activity built around a one-size-fits-all rule runs the risk of being inappropriate for the firm in the first place, impairing decisions on product offerings, pricing, reserving, capital allocation, even the decision to remain in business at all.

In contrast, principles-based regulation allows firms to focus on their true risk profile to make decisions based on changes in their business rather than changes in rules. Dynamic modeling allows companies to anticipate extreme risk scenarios and prepare for them. Under rules-based methodology the same prescription applies, so long as the same rules apply, whether a sound business practice or not. Finally, greater transparency gives firms freer rein to engage in best practices and stakeholders more leverage to recognize and reward good choices.

We at Transamerica Reinsurance look forward to consulting with our clients on the implications of economic capital as this issue continues to develop.