Solvency – Principles, Values and Rules

The Canadian insurance market pioneered the transition from formula to principles based solvency rules. There has been a significant movement toward a principles-based approach in Europe and to a lesser degree in the US. The goal is to achieve a degree of harmonization among solvency views, however the challenge is in moving from theory to practice.

Paul Rutledge, President of SCOR Global Life Americas, and Mary Hardy, CIBC Chair of Financial Risk Management at the University of Waterloo, recently discussed various approaches to solvency determination. Dr. Hardy’s primary academic focus covers the risk management and solvency of life insurance companies and pension funds. A Fellow of the Institute of Actuaries (UK) and the Society of Actuaries (SOA), she has co-authored two texts that are part of the FSA and FCIA curricula. She was a pioneer in the development of regime switching models and the use of conditional tail expectation (CTE) in actuarial risk management. She recently co-authored “A Comparative Analysis of US, Canadian and Solvency II Capital Adequacy Requirements in Life Insurance” for the SOA, with Ishmael Sharara and David Saunders.

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PR: In my mind one thing that has driven the current structure in the US is the tremendous regulation specifying rules and requirements within product design. Canada has a lot more freedom with respect to product design, and it seems to me there’s a corollary: the limitations that basically define specific parts of product design in the US never arose in Canada. In turn, this difference in approach might have helped create an environment more conducive to a principles-based approach to solvency.

MH: I’m not sure if the freedom is a cause or a symptom of greater trust, but it’s clearly a two-way street. We sometimes joke that the US industry intensely dislikes regulations on all sides, yet has so much of it, while the Canadian culture believes in regulations but really
doesn’t have nearly so much of it. I think if you have a rules-based structure it ends up as a conflict – or at least a game – where one side sets the rules and the other side works on how to get around them. With a principles-based structure there’s no point in finding loopholes because you can’t loophole a principle.

This is also true with product design. The UK regulators did intervene in product design and product illustrations. Why was that? Well, because some companies did some stuff that really didn’t reflect very well on the industry. Then trust is lost, and there is more regulation and less freedom.

**PR:** And it’s federal oversight in the UK and Canada.

**MH:** We have provincial regulations in Canada but basically you can consider it federal. It’s also a small world, few insurance companies, few people compared to the US. Everyone in the industry knows each other so communication between insurers and regulators is much easier.

**PR:** You see this at the state level in the US. But to an extent these close relationships have engendered, let’s say, diversity of supervisory activity, which then has raised the call for more national standards and rules.

### A Balance-Sheet Approach

**PR:** In the US for the last decade-plus there’s been this huge focus on principles-based reserves, totally independent from any discussions on the effect it would have on capital. Most solvency regimes don’t separate reserves from capital standards. Can you compare and contrast these views?

**MH:** I’m an academic and we have the luxury of ignoring things sometimes that are not interesting to us. I’m very interested in solvency and the total-balance-sheet requirement, and less interested in how you choose to break that down into a statutory report on technical provisions (reserves) and required capital. But certainly I think the concepts of capital and reserves, and their interrelationship, must be tied together.

In Canada when we began to look at the valuation of variable annuities, it made absolutely no sense to me to calculate reserve valuations deterministically and capital stochastically. What does make sense to me is to determine how much capital you need to be solvent, and then on a consistent principle determine how much of that represents your technical provisions.

**PR:** Which is how C3 Phase 2 was implemented.

**MH:** Yes – that’s exactly how the Canadian variable annuity experience fed into C3 Phase 2. It is all principles-based. The ideal for me is a world where we look at solvency on an “own-risk” basis, meaning it’s internal and principles-based. In other words a C3 Phase 2 world for more risks... because solvency can’t ignore the asset and the liability valuation.

### Assets, Liabilities and Hedging

**PR:** Let’s talk about asset/liability valuation. From my perspective Solvency II theoretically considers both liabilities and assets. However, they separate the analysis of the two cash flows as independent pieces of the overall solvency calculation. To me that generates discontinuities and illogical results. Within the Canadian framework, are companies allowed to look at the combined cash flow in determining solvency requirements, or is it a bifurcated system as well?

**MH:** It depends on what you’re valuing. Going back to Solvency II the original proposal is to value assets and liabilities as consistently as possible. Unfortunately, there seems to be some movement away from that original viewpoint in the recent developments.

**PR:** Well, the assets are valued at liquidating value – what you think you can get in the market – and the liabilities are valued at an own-risk discount rate.

**MH:** But whether liabilities are valued at liquidity or transfer-cost value, it’s supposed to be market consistent.

One thing that resulted from the financial crisis is that we are not sure what “market consistent” means anymore. It was once a fundamental principle of finance that there is one value – not many values, one value – and it’s a market value. I don’t think even the purest finance professional believes that anymore. Now we talk about intrinsic value separate from market value.

**PR:** In my view under the current Solvency II regime, you can have a set of cash flows on the asset side that match the cash flows on the liability side, and you can create value by buying assets to match liabilities as those liabilities emerge to immunize yourself. When you split the two apart and say, “We can sell the assets totally independently of the liability,” aren’t you disavowing the value creation? You are using different discount rates and generating volatility.

**MH:** You’re right if your basic premise is right. But if you construct a cashflow match, that would be a hedge. And if you can persuade your regulators that it’s a hedge,
then Solvency II would recognize that hedge.

PR: But Solvency II’s definition of hedges is constrained and becoming more so.

MH: That’s part of what’s holding things up. I agree that Solvency II is moving away from encouraging and recognizing hedges. And this is contrary to what it should be doing, which is focusing not only on how much capital you have but also on how you are managing the risk. In principle you would get credit for that hedge, but the constraints on recognizing hedges appear increasingly stringent and unrealistic.

PR: They have promulgated some temporizing measures but nobody seems to understand what they mean.

MH: And I think that’s the problem. The way I interpret the principle of Solvency II is: If you can persuade your regulators that you have a well defined hedge, then you can take credit for that hedge. And if you chose not to hedge – if you have a liability and you don’t hedge it – you should have to hold more money. The hedge needs to be well specified. You can’t just say, “I’m planning to hedge,” and expect an offset.

Canadian Equivalence

PR: Where do you see the major differences between the Canadian approach versus Solvency II? Do folks in Canada think there will be a problem with equivalence?

MH: I think that Canada assumes it will be granted equivalence. Canada is already closer to market consistent, I think, than many jurisdictions. Canada’s current solvency system is an asset/liability system. It instigated mandatory dynamic financial analysis before anybody else as part of solvency management. I don’t think Canada is going to step back from that.

The one caveat is that the insurance regulator in Canada is also the banking regulator, so there may be some sense that there may be more convergence with banking regulations. I don’t see much evidence of that, but I do get the feeling that what was a collaborative relationship before is less collaborative now. I’m hoping that’s a temporary setback.

I cannot see a future where Canadian valuation does not encourage, recognize and reward risk mitigation through asset/liability management. I think that Solvency II will encourage such behavior as well, because I think the people who are trying to implement Solvency II understand the importance of those concepts. Certainly the people who designed Solvency II in the first place understood this.

The challenge in Canada, as elsewhere, is the political turmoil that you go through to get from that initial idea to an implementable, harmonized system. And when you layer the financial crisis on top of that everyone begins to rethink the fundamental principles – like market value.

Managing the Tail

PR: Both Solvency II and the Canadian scheme are predicated on what capital is needed in the tail. But who decides when you are in the tail?

MH: That’s a really good question. The whole point of having this cushion is so you can withstand the extreme periods. But if the extreme event comes to pass, you have to be able to use that money to withstand it. Regulators can’t then say you need more to withstand another potential event.

There are two ways that a company could end up in the tail. One is the company made an error. It’s a one-off event, and they should just do whatever they need to do to liquidate. Alternatively, it’s a systemic crisis, as in 2008. In these cases a different, more flexible approach needs to be considered. You don’t want to be the only company that is failing to meet solvency targets and you don’t want to be the first one, even if many companies are going to follow you. But once many have followed, it’s probably a time for the regulators to say, “This is why we have such a stringent requirement for capital, because now we need it.” Then you create a plan for rebuilding.

PR: Where where do you think Solvency II is really going to end up and how long do you think it will take to get there?

MH: I’ve gotten a bit discouraged about it, I suppose because I believed in it so strongly when it was being first developed. I’m disappointed that the Committee moved to Value at Risk (VaR), which I think is a bad risk measure. I think they should use CTE (conditional tail expectation), which incidentally is what Basel III has just said it is going to use. Moving to VaR, I think, was an inappropriate nod to the banks. It’s like they said to the banks, “Oh, well you use that, you must know more than we do.” But they don’t. CTE is a much more robust measurement in terms of the practicality of modeling tail events.

PR: The problem with CTE is it depends on where you set it. This becomes a
bigger concern as bank and insurance regulation become one in the same. This is happening in Canada, as you said. It’s happening in the UK, and it’s already happened in Ireland. But the tail risk in banking is much shorter than in life insurance. So a CTE-97 or CTE-98 is a very different animal for a bank than a CTE-98 for an insurance company. But I think a regulator will face pressure to apply the same calibration to both as a political and an image issue. You could end up with some bad decisions from a regulator that’s really supervising two very different industries.

MH: I don’t think the supervision is that close, but I know that some feel it’s too close. I agree strongly that insurance regulation must reflect the very different nature of the liabilities and risk management.

PR: What’s interesting to me is that in the US we have come through a pretty dramatic economic transition. There have been no insolvencies here with respect to the basic industry. Yet I think there’s a valid concern that if Solvency II rolled through that same book of business, we would have had bankruptcies at the end of the day.

MH: But if I push back the other way, if you hadn’t had C3 Phase 2 I think you could have had insolvencies.

Good Judgment and the Role of the Regulators

PR: Obviously markets throughout the world have developed their insurance products based on local cultural issues and customs. And also markets are at different stages of economic development. As regulators work towards convergence, they are putting so much specificity, if you will, around technical issues. But ultimately there is going to be a large amount of judgment applied.

MH: And judgment is the basis of principles-based solvency management. I agree that as you see these principles-based systems acquiring more and more detail and rules, you begin to wonder whether the principles will be lost.

PR: Again, I’d point to the US state regulatory system as having that kind of judgment flexibility. Even with book-value accounting some of the state regulators granted permitted practices to help liquidity temporarily or to provide some reserve relief during the worst days of the financial crisis.

MH: And so we had principles-based decisions being made in a rules-based system.

PR: Right. So that’s where they start intersecting and agreeing in terms of the roles of the regulators. Any final thoughts on the whole topic?

MH: The challenge with Solvency II is that the industry does not operate in one culture but many different cultures. It’s easier to talk about a principles-based approach in Canada, which has a more consistent culture.

I believe in the actuaries and their knowledge of their companies’ risks. The best role for the regulator, in my view, is to support the actuary in the management of their own company’s risk. That’s why I like the collaborative approach. When the regulator treats the company as naturally delinquent and considers it their job to pull them back in line – and into the same line that every company is in – that doesn’t work for me. But what equally doesn’t work is where the company – the actuaries and management – considers it their job to get away with as much as possible – maximize returns, maximize next year’s bonus, and not be sufficiently concerned about long-term solvency. I hope that we retain in both the US and Canada a healthy respect for the benefits of regulators working with companies in maintaining strong stewardship.