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# Talking about Capital and Stress

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Perhaps in the past, conversations about capital and stress have been private. Amongst insiders who all understood the unspoken parts of the conversation. Or, more likely, these conversations rarely happened. Either way, here we stand. With the advent of ORSA, insurers and regulators are called upon to communicate with each other on these topics but without a common language.

If we create a common language, it will be more likely that what an insurer's management says about their objectives regarding level of security and the resulting level of capital might be understood by the regulators reading the ORSA. And with a common language, insurers whose business depends on risk taking, not on maximizing security, can communicate with regulators who are tasked with preventing the second coming of a global financial crisis about realistic levels of risk taking.

But before we get to Capital and Stress, let's acknowledge the fundamental confusion that exists about the nature of the ORSA. This confusion comes about because there is disconnect between the title, "Own Risk and Solvency Assessment" and the actual work that is wanted. For the longest time, I had the impression that the word "Solvency" meant that a firm had assets that were greater than the liabilities. A solvent company had a net worth that is greater than zero. So under that definition, a solvency assessment should take 10 seconds. Check the balance sheet. Yep. Assets are greater than liabilities. Assessment complete.

Under the U.S. insurance regulatory regime, the Risk Based Capital system is used to determine minimal capital levels. Insurers with capital less than the Company Action Level of Risk Based Capital must be placed under the control of the insurance commissioner. Insurers that have capital less than the Authorized Control Level of Risk Based Capital will have a long discussion with their supervisor and might be brought under control by the regulator.

Now, the term Risk Based Capital is itself confusing to many. It is actually not a measure of capital. It is a measure of risk. It is an estimate of the amount that a company might lose in the future under certain specified future adverse conditions. An "amount that a company might lose in the future under certain specified

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future adverse conditions" is a definition for a broad class of risk measures. If you calculate such an amount and the company then holds unrestricted funds in the amount of the risk calculated, then the firm is secure against loss events such as those that formed the basis of the risk calculation.

So before the ORSA, many had come to think of the two levels of RBC as a "Solvency" standard. Under that view, an ORSA would be a process to check whether the actual capital of the insurer was or was not higher than the RBC. And in fact, a large fraction of insurers developing their first ORSA Summary Reports for submission to their insurance department are performing just that test.

But the ORSA Guidance Manual actually asks something quite different.<sup>1</sup> What they ask for is something that could broadly be called a Capital Adequacy Assessment. That is, a process of determining whether capital is adequate for the security standard of the insurers.

It is interesting to note that the ORSA Guidance Manual requires that an insurer specify in great detail the Security Standard, but there is no documentation of the NAIC specifying such details regarding the RBC! Many insurers have been as muddled as the NAIC about the details of their own risk capital standard. Specifying the actual risk tolerance and the resulting risk capital standard is one of the more difficult steps in the ORSA process for management teams at many insurers.

With clearer terminology, perhaps the task would be easier. Most insurers can be observed to have operated for long periods of time at a relatively stable capital level relative to the size of the company.

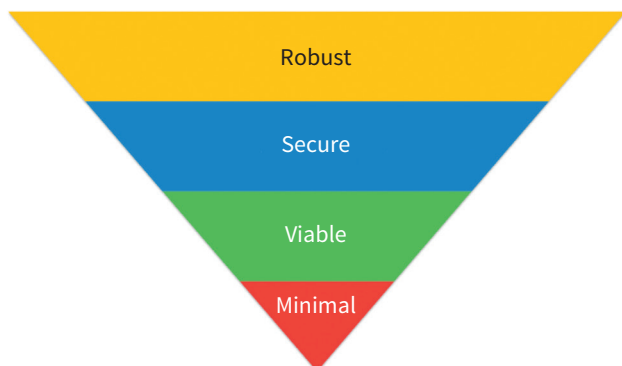
There are effectively four broad levels of capital:

- Minimal – enough capital to survive under normal volatility, small margin of safety, no resilience. A major loss event would render these insurers below the company action level of RBC or even totally insolvent. These insurers effectively

- use the regulator’s risk based capital authorized control level as their risk capital standard.
- **Viable** – enough capital to provide for a single major loss event and to avoid reaching minimal level with “normal” volatility. These companies generally operate comfortably in a market where customers are not focused on assessing their insurer’s financial strength. Sectors like personal auto and health insurance.
  - **Secure** – enough capital to satisfy sophisticated commercial buyers that you will pay claims in most situations by providing for maintaining a viable level of capital after a major loss event. These insurers would expect to raise capital to get back to the Secure level after a major loss event.
  - **Robust** – enough capital to maintain a secure level of capital after a major loss. A few reinsurers operate at this level of capital as well as a few direct writers who have a long tradition of operating at the highest level of security. These insurers would not expect to need to raise capital even after a major loss event, but would expect to be able to build surplus back to the Robust level via earnings.

These capital levels are generally maintained for many years and are thought of as fundamental to the self-definition of the insurer. They are often then closely linked to rating targets and reinsurance purchasing. These four statements could be used or modified to state an insurer’s risk strategy and tolerance. Notice that in all but the lowest category, a major consideration is the position of the insurer after a major loss event. This is in stark contrast to many of the largest banks where the objective, at least prior to the financial crisis, was to close the books each night with capital as close as possible to the required level with no margin whatsoever for losses.

Using this language, the process for the ORSA is turned on its head. Instead of forcing managers to develop a risk tolerance statement and risk capital standard in the foreign language of statistical models, they can think in terms of aligning their capital with the insurer business strategy, as they have been doing forever, and leave translation into statistical terms to the modelers.



So when the modelers are translating a security standard along the lines of the above into statistical terms, they will then be performing one of the three basic types of risk assessments that might be referenced in the ORSA.

1. Risk Assessment for purposes driving the risk mitigation and control activities as well as determining the impact of those activities,
2. Risk Assessment for purposes of determining risk capital standard,
3. Risk Assessment for purposes of assessing impact of adverse environment.

Section 2 of the ORSA, titled “INSURER ASSESSMENT OF RISK EXPOSURES” asks for risk assessments in normal and in stressed environment. We would take this to mean that the risk assessment in the normal environment is a proof of plan viability. The insurer should show that they have adequate capital under their plan to meet their own risk capital standard. That would mean performing a risk assessment of type 2 from the list above to a projection of the company balance sheet under the future plan for risk taking. The look at risk assessment under a stressed environment would mean to perform risk assessments of type 3 from the above list and then in addition assess the risks with type 2 assessments to determine if the capital is still adequate.

That seems clear enough until you contemplate what needs to be the level of stress? Is the level of stress absolute or relative? For instance if two companies do similar business but one has a Secure risk capital standard and the other has a Viable risk capital standard, should they be looking at similar stress scenarios or would be insurer with the Viable risk capital standard look at less severe scenarios?

Here is another place where clearer language could be a great help. In general, stress testing is open-ended and un-defined. But for both discussions with various internal audiences and especially for discussions between insurers and regulators reviewing the ORSA as well as for discussions between regulators, a common language about stress tests needs to be used.

It is very helpful if the language about stress testing would include terminology for several different levels of stresses such as:

- **Normal Variability** – Stress falls within expected range for a normal five year period which is not necessarily the most recent five years.
- **Historical Worst Case** – Worst run of experience in the past 20–25 years. That run may last for months or years. These scenarios may be consistent with Normal Volatility or they might be Realistic Disasters. Usually that is discernable



based upon how much worse they are than the next worst case.

- Realistic Disaster – Worst experience that is reasonably expected in the future (even if it has never happened).
- Future Worst Case – Maximum plausible loss that could occur even if you believe that likelihood is extremely remote.
- Multiple Scenarios – where combinations of scenarios are considered. Many of these will be combinations of realistic disaster scenarios. These combinations will almost always be a Future Worst Case.

Ultimately, this can then be simplified down to three levels of adversity:

- Normal Volatility that can be managed via risk management processes and absorbed into earnings.
- Realistic Disasters that cannot be absorbed into earnings but must be absorbed into capital. These stresses are the focus of capital management and capital adequacy assessment. They are considered to be remote but plausible adverse events. For the purpose of the ORSA, one important “disaster” to consider might be an extreme surge in sales that radically increases the amount of risk without increasing the capital fast enough.
- Worst Case scenarios are those that are highly unlikely. These scenarios are tested primarily out of curiosity, and the test results may or may not drive any risk management actions because they are so remote.

Some combined risk scenarios may be Realistic Disasters, though many will be Worst case scenarios.

With the idea that it is reasonable for an insurer to prepare for a Realistic Disaster Scenario, but not practical to be prepared for

all Worst Case scenarios. Not practical because the insurance would cost too much and less insurance would be sold.

With such a common language relating to stress tests, the results of the stress testing and the response to those results can be simply and comparably explained.

The outcomes of stress testing fall into a pattern that will be the same across all insurers.

- An insurer should be able to withstand normal volatility without any lasting reduction to capital.
- An insurer should be able to withstand a Realistic Disaster for most of their risks without a game changing impairment of capital, i.e., it would be realistic for them to plan to earn their way back to their desired level of capital. For the most significant one or two risks, a Realistic Disaster may result in Capital impairment that requires special actions to repair. Special actions may include a major change to company strategy.
- An insurer can usually withstand a Worst Case scenario for most of their risks with the likelihood that for some, there will be an impairment to capital that requires special actions to repair. For the largest one or two risks, the insurer is unlikely to be able to withstand the Worst Case scenario.

Those three statements are in fact a requirement for an insurer to be said to be effectively managing their risks.

So the ORSA and any other stress testing process should result in the development of the story of what sorts of stresses require special management actions and what types result in failure of the insurer. And for an insurer with a risk management program that is working well, those answers should be known for all but one or two of their risks. Those would be the second and third largest risks. An insurer with a perfect risk management program will not have very much daylight between their first, second and third largest risks and therefore may well be able to survive some worst case scenarios for even their largest risks. ■

#### ENDNOTE

- <sup>1</sup> Perhaps that is why, after getting the entire world to adopt the awkward ORSA terminology, the Europeans have abandoned it in favor of a new term, “Forward Looking Assessment of Own Risk”. Dropping the misapplied Solvency word.



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