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The following essay was submitted to the Joint Risk Management Section's call for financial essays in Fall 2011. It was fortunate to be recognized as one of the top papers.

Focusing on Own Risk of the ORSA process

Effective risk management is not driven by a regulatory process. In the long run the corporate culture and CEO incentive plans have much more to do with successfully traversing a long time horizon than any models. Risks tend to accumulate, especially during stable periods when many so-called experts claim it is "different this time". It never is.

So how can an insurer required to comply with an Own Risk Solvency Assessment (ORSA) regulation leverage this information and use it internally to improve the likelihood of solvency and gain a competitive advantage?

Risk Concentrations

Becoming aware of risk concentrations is the most important concept to understand when managing risk. Risk focused decision making is likely the largest concentration issue at many companies, where one individual uses dictatorial power to push through an agenda. Risk comes in many forms.

Many seeking to implement ORSA have well-intentioned agendas. They are trying to do the right thing. But that, unfortunately, is not enough. Insolvencies will not be reduced through legislation. Who among the risk community feels safer now that Risk Focused Examinations are a requirement? ORSA is the start of a useful process, not the final effort. Think back to the origins of cash flow testing requirements. The 7 scenarios tested were not that useful by themselves. Once the initial models were built, a new paradigm had formed.

Modeling economic capital, for example, provides useful information during normal times but tends to be procyclical and virtually useless when the economy implodes. The missing analysis concerns the gross exposures to concentrated risk. Modeling net exposures works fine when counterparties are functioning, but insurers will not enjoy the surprise when a reinsurer or other financial counterparty becomes insolvent and exposes the tangled web of financial intermediaries. That is when the concentrated exposures to geographic location or risk become apparent.

Helping ORSA Drive Value

So if ORSA will not meet internal needs, how can you drive the process so it adds value and better decisions are made? While you must realize that models will not solve your

problems, they can be very useful in helping to understand the risks that have been accepted. The risk manager must avoid using models as a black box that generates a single number. Models can not optimize a block of business, but they can provide information about how a new block will integrate with an existing one if you understand their assumptions and value drivers. Optimization routines are generally based on the benefits of diversification, using correlation matrices to combine multiple risks.

Correlations are based on recent historical data, and do not go back far enough to include previous hard times. Think of the different decisions that would have been made if housing market data had included information from the Great Depression of the 1930s, or if payout annuity pricing factored in the 1918 influenza pandemic. When we model future interest rates no one considers data from the Weimar Republic's hyperinflationary period. Why not? Hyperinflation does not seem all that remote right now.

Data is never complete, and correlations constantly change. Many of the metrics required by the Basel Accords did not include data going back 10 years, so banks made decisions assuming risk interactions would remain consistent with those from a period of relative peace and prosperity. The time horizon tested under ORSA has long been a bone of contention. In reality, it doesn't matter. No matter what time horizon you choose the data will under-estimate the likelihood of default (kudos to Nassim Taleb for making so much money from this revelation). Data collected in recent periods ignore future risks we have not considered as well as the inevitable but ignored asteroid, super volcano, and war. To argue about the probability of insolvency in the next year is preposterous. Defaults cluster, and if you go far enough into the tail all firms are subject to creative destruction.

To say that every firm should be capitalized so only one out of 200 will fail in any year (99.5%) is ridiculous and should satisfy no one.

Realistic stress testing is the best way to test for solvency risk. Unfortunately most CEOs prefer to be wrong with the herd rather than alone when managing risks. No one was ever fired for not seeing the approaching "perfect storm". Regulatory driven stress tests tend also to be impacted by politicians. The initial European bank stress tests had no component for a sovereign debt crisis, even though one was already under way. They did not want to "scare the markets". Does anyone test their CEO's strategic plan for ineptitude? I didn't think so.

Understanding gross exposures, where your counterparties (e.g., reinsurers or swap counterparties) go under or when a 10 day rain storm hits California should be the norm. An insurer should know before the fact what their exposure is to a strong storm or earthquake hitting San Francisco, Tulsa or Charlotte. Building and maintaining this database may be the most useful thing a risk team can accomplish, because it helps the firm better understand its risk profile and prioritize its decision making.

Current best practice says that risks should be aligned with the firm's risk appetite, but companies discovered in 2008 that their risk appetite is not stable. In the good times, boards become much more likely to approve the risky new opportunity. Models thrive during these periods, purporting to optimize results. But they are using data from the tail, from the portion of the distribution where extreme *positive* results occur. Qualitative assessment and contrarian thought can provide a competitive advantage. "This time it's different!" becomes the mantra in the press. But it's not different, and when instability returns risk appetite goes down. Warren Buffett has said "Be greedy when others are fearful, and fearful when others are greedy". CEOs and risk managers would do well to hang this on the wall of their office.

It's not what the regulators ask for that is important; it's how you leverage it to add value that makes enterprise risk management worthwhile. It will pay for itself many times over if firms understand the benefits they receive.

Building a Competitive Advantage

Risk management is no different than other business disciplines. Early adopters can enjoy an advantage, but eventually the practice becomes common and leads to concentration risk. If everyone has the same risk mitigation strategy, thinking they are the only ones employing it, then it eventually won't work. At some point there will be no one to take the other side of the bet. We have seen this in the past when hedge funds were forced to exit an asset class and found that many were following the same strategies and using the same asset classes. What seemed safe quickly morphed into heavy losses and fund closure.

Those who choose the path of least resistance, maintaining harmony and not making waves will, in the long run, destroy value. A healthy dialogue that encourages alternative views will bring out the best in a team, and it should not always be the same person. The key is to get these viewpoints into the mix early enough so they can be used to make better decisions.

Splitting the Job

Enterprise risk management can turn into a bureaucracy if you are not careful. Better decisions will be made if strong employees rotate through the risk manager position and then return to line management. This will only work if the corporate culture embraces risk in a way that is driven top-down and practiced bottom-up. The ERM team will own the process, not the risks. They will communicate consistent practices and coordinate communication of risk concepts. The best location for this team will depend on the specific firm but could include audit, finance or actuarial. Residing here will be the master list of risks and the projects to better manage them. The focus here will be on risk mitigation and managing the ERM process. The risk manager should not receive a bonus based on financial results. Incentives should be aligned with maximizing long-term value.

The strategic planning area is where the Chief Risk and Return Officer will reside. This person will look at opportunities as well as mitigation efforts. They need to be a trusted confidante of the CEO and respected by the board, knowledgeable enough to ask modelers tough questions and understand the answers. Someone who understands emerging risks, interactions between risks, has an eye for unintended consequences and is willing to share ideas and concerns would be ideal for such a position. It sounds just like many actuaries I know.

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