Joint Risk Management Section

Canadian Institute of Actuaries
Casualty Actuarial Society
Society of Actuaries

HOW TO REVIEW AN ORSA

Co-Sponsoring Organizations:

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Preamble

The Joint Risk Management Section of the Society of Actuaries (SOA), the Casualty Actuarial Society (CAS) and the Canadian Institute of Actuaries (CIA), is pleased to release our fifth essay e-book, this time addressing "How to review an ORSA."

This e-book contains topical essays that express the opinions and thoughts of a number of authors on the subject. It should be understood that the thoughts and insights shared herein are the opinion of the authors and not necessarily those of the Society of Actuaries, the Casualty Actuarial Society, the Canadian Institute of Actuaries, or corresponding employers of the essayists.

The editorial team awarded prizes to the following essays:

First place
Regulatory review of ORSA framework, by Laura Maxwell

Second place
A Literal Guide to ORSA Oversight, by Mike Celichowski

Third place (tie)
Four C's for Reviewing an ORSA Report, by Joonghee Huh
How to Review an ORSA, by Stuart Hayes and Mark Mennemeyer

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Introduction

The focus of the call was "to develop a body of guidance for the evaluation of an ORSA Process and ORSA Summary Report." Authors were instructed to address key considerations for at least one of the two groups of primary reviewers of an ORSA report: the board of directors and regulators. In addition the call also encouraged the discussion of a number of other key considerations.

The editorial committee received 10 submissions, which have been organized into three broad categories: ORSA's role with respect to ERM, ORSA's relationship to risk culture, and Regulatory review of ORSA reports.

ORSA's role with respect to ERM

Hayes and Mennemeyer's essay contemplates the fundamental question of "What is ORSA trying to accomplish?" Based on this high-level context the authors suggest a number of key topics that reviewers should focus on: ERM framework, Quantification of risk exposure, Capital modeling and prospective solvency assessment, and Governance and controls.

In "Four C's for Reviewing an ORSA Report" Huh discusses the attributes of Comprehensiveness, Consistency, Comparability, and Consumability. While not exhaustive, the author argues that the four C's are good indicators for whether an ORSA accomplishes the intended goals of fostering an effective level of enterprise risk management, and providing a group-level perspective on risk and capital to supplement the existing legal entity view.

Under the title "Creating a win-win ORSA review" Rudolph suggests leveraging ERM ASOPs 46 and 47 to structure the review and discussed some themes that emerge from this approach: Contrarian thought, Concentration risk, Time horizon and emerging risks, Stress testing, Consistent process, and Experience.

Celichowski's "A literal guide to ORSA oversight" reflects on how the meaning of the words "Own," "Risk," "Solvency," and "Assessment" sheds light on the central role of the ORSA process in a company's overall ERM program, and how addressing these four words can give comfort to the Board that the company is well positioned for the future.

In "How to review an ORSA: thoughts for a board member's initial reading" Brentlinger argues that an "ORSA aligns well … [with] the board's governance role and the board's role of consulting with management on the strategic and operational direction of the company," and provides examples of how a board member might leverage existing processes and relationships with company management and key functions for the ORSA review.

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ORSA's relationship to risk culture

Ingram and Underwood's "By their works ye shall know them - evaluating risk culture for Own Risk and Solvency Assessment" summarizes research and provides reflections on the meaning of risk culture and how a strong risk culture is crucial to an effective ERM function.

In "Risk culture assessment based on ORSA" Shang discusses what information about risk culture might be gleaned from an ORSA report, and provides some useful questions that can be used as part of a risk culture assessment.

Regulatory review of ORSA reports

Maxwell's "Regulatory review of ORSA framework" suggests structuring the process using the five key principles from section 1 of the NAIC manual. While a check-list approach is discouraged, a catalog of questions is provided to guide the review for each key principle.

Under the title "How to review an ORSA" Kelliher contributes a Solvency II informed perspective on how a regulator or external consultant might approach the task. Specific areas discussed are: ERM framework, Current risk profile, Projecting risks and solvency, Stress and scenario testing, Management actions, and Liquidity risk.

In "Reviewing a summary ORSA report: the score card approach" Narine argues for benchmarking to make ORSA reports comparable across companies. The idea of a score card is illustrated with a mock-up example.

We hope that this e-book generates further thought and discussion. What are your takeaways?
We welcome further commentary, editorials and rebuttals to add to our continuing thought leadership on the topic.

Enjoy!

Best wishes,

Thomas Hartl, PhD, FCAS, MAAA—*Bryant University*
Kevin Olberding, FSA, CERA, MAAA—*Unum*
David Schraub, FSA, CERA, MAAA, AQ—*Society of Actuaries*

On behalf of the Joint Risk Management Section Council of the Society of Actuaries, Casualty Actuarial Society, Canadian Institute of Actuaries.

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* Denotes essay winner

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How to Review an ORSA

By Stuart Hayes and Mark Mennemeyer

Introduction

A major objective of the Own Risk and Solvency Assessment (ORSA) initiatives now under way around the world is to allow stakeholders such as boards of directors (BODs) and regulators to more easily and transparently assess the state of enterprise risk management (ERM) in an organization.

ORSA regulations and guidance, such as the NAIC's guidance manual in the U.S. and OSFI's guidance manual in Canada, are intentionally non-prescriptive; regulators are essentially asking companies to self-assess components of their ERM framework as a way to tell stakeholders their ERM story and explain why that story makes sense for the organization.

Consequently, most ORSA regulations are flexible enough to permit organizations to use the report for two primary purposes: to meet their internal ERM and solvency assessment needs and to meet requirements related to external regulatory oversight. BOD and senior management buy-in for the organization's ERM framework is an intended result, if not an explicit mandate, of most ORSA regulations. As a result, companies should be creating processes and reports that meet their internal management and strategic needs as well as satisfy regulatory requirements. Companies that focus first on these strategic, planning, and internal risk management aspects are likely to benefit much more from ORSA than those who treat the requirements merely as regulatory exercises.

A variety of stakeholders, including regulators, representatives of rating agencies and BODs, will act as reviewers of ORSA reports. Rather than resorting to a "checkbox" approach, reviewers should strive instead to understand the story the company is conveying, and whether it fits with sound risk management practice for that particular organization.

Back to the Basics: What Is ORSA Trying to Accomplish?

The basic purpose of the ORSA — an assessment of current and future solvency according to the unique characteristics of the company and its internal perspectives on risk — sets the high-level context for a review. As such, ORSA reports should help reviewers answer a few fundamental questions:

- Is the company managing its risks in a manner that fits its size, scale, and complexity?
- Is the qualitative risk management employed by the company adequate for the risks it faces?
- Is the quantitative risk management employed by the company adequate for the risks it faces?

Each company's unique situation should be reflected in the reports. For example, a large multi-national multi-line writer should manage its risks differently than a regional mono-line carrier.

In the process of investigating these fundamental questions, reviewers should focus on several key topics, as described below.

ERM Framework

The ERM framework forms the foundation of a company's ERM program. The framework's design should be based on the unique characteristics of the business and supportive of the company's perspective on risk. A key element is an articulation of the company's risk appetite, including the associated risk limits and tolerances used to monitor its implementation. Other important elements of the framework are an organization-wide risk culture that supports the company's attitude toward risk, and a risk-based structure for management decision-making. The reviewer should evaluate whether these elements are present and whether they are suitable for the company's unique situation.

Quantification of Risk Exposure

The assessment of risk exposures is a major component of the ORSA and should begin by identifying and describing each material risk. This process is intimately related to the unique

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business of each company. Although some commonality between companies can generally be expected (e.g., life insurers of all sizes would almost certainly want to analyze their mortality risk), a reviewer should not strictly compare the set of risks appearing in an ORSA report against a predetermined checklist, but should instead consider whether those risks adequately reflect the nature of the company's business.

For each material risk, the ORSA report should describe the assessment methodology and the results of that assessment. Once again, a reviewer of this process should resist the urge to rely on comparisons to a predetermined checklist. For example, requiring all insurers to model liability losses with a lognormal distribution would not be consistent with the spirit of the ORSA. Instead, a reviewer should seek to understand how each risk exposure is assessed and whether the approach is appropriate for the risk and the company's unique business.

Capital Modeling and Prospective Solvency Assessment

Risk and capital modeling is another area where the application of universal standards should be avoided. For certain companies (or even for certain risks within an organization), a complex probabilistic approach to modeling risks is likely warranted, while for others, something more simplistic and scenario-based may be appropriate. In many situations, some combination of the two approaches (stochastic and deterministic modeling) is likely best. However, not all companies should be held to such a standard. It is more important that the company's ORSA report demonstrates it has considered such options and has followed appropriate principles in selecting an assessment approach.

The ORSA report should evaluate whether the capital available is sufficient to protect the company from future insolvency over the business planning horizon, within the context of its risk profile and strategy. If the company assesses its future risk exposure following sound practices and determines that its risk of insolvency exceeds internally established limits, this should not be deemed a failure of the ORSA; rather, the ORSA in this case has successfully provided senior management with the appropriate insight to take corrective action.

Governance and Controls

Critical as they are for an effective ORSA, risk quantification techniques by themselves are not sufficient. In addition, there must be a structure in place to ensure that systems are connected, processes are carried out, and results are communicated and analyzed at the appropriate level. Consequently, a risk governance structure and a system of internal controls form an important underpinning to ERM, and the ORSA report should describe this infrastructure and its role in risk management.

Different governance structures will be appropriate for different organizations; for example, a single risk committee might be able to efficiently monitor the operations of a small insurer with homogenous products, while a complex global organization may require multiple teams with expertise in specific products or categories of risk. The reviewer should evaluate whether the report provides confirmation that an appropriate governance structure has been established and maintained, and whether the insurer has considered how effective this structure is within the context of its culture, objectives and appetite for risk.

Traditional risk management practices — including monitoring exposure to key risks and maintaining internal control processes to assure that risks taken are within the company's risk tolerances — remain important elements of an overall ERM program. Risk monitoring should take place routinely at all levels of the organization, and the processes should be documented in the ORSA report. It should also assess whether internal controls are effective and efficient

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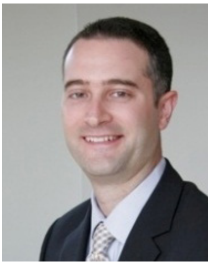
in light of the company's risk profile, and provide assurance that the company is in compliance with its self-determined control structure.

Conclusion

Reviewers should look for a clear demonstration of solid risk management principles rather than prescribed approaches in ORSA reports. A company's risk management approach should not be unnecessarily complex or secretive, and a reviewer with the appropriate qualifications should be able to understand the thought process and conclusions described in the ORSA report. If a qualified reviewer is unable to do so, it could indicate underlying uncertainty or problems with the company's overall risk management framework, the ORSA report itself, or perhaps both.

The overarching theme and intent of ORSA regulation is to enhance and/or prompt sound risk management practices in the industry, a noble endeavor and one that should benefit both individual companies and the industry as a whole. Reviewers can help the effort by focusing on the broader issues of a company's overall risk identification, assessment and mitigation within the context of its business. By avoiding a cookie-cutter approach to an ORSA report, the reviewer will gain a clearer picture of each company's individual risk philosophy and processes, and best meet the spirit of the global ORSA initiatives.



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Four C's for Reviewing an ORSA Report

By Joonghee Huh

The primary goals of ORSA are to foster an effective level of enterprise risk management as well as to provide a group-level perspective on risk and capital to supplement the existing legal entity view. An ideal ORSA report should evidence that these two goals are adequately met through the ORSA process. Depending on the nature of the businesses of the company, the ORSA report will be inevitably varying substantially from one company to another in terms of contents and structure. However, there are general common attributes that a good ORSA report should reflect and a reviewer should look for. These attributes can be summarized as four C's: Comprehensiveness, Consistency, Comparability, and Consumability.

Comprehensiveness

An ORSA report should depict a comprehensive picture of the company's risk profile, and this can be achieved by addressing following three key components: (i) risk factor coverage, (ii) source of risk, and (iii) manifestation of risk in the company's financials. The report should cover all relevant risk factors, such as credit risk, market risk, insurance risk, operational risk, and strategic risk. In order to provide insight into the source of these risks, the report should outline the composition of asset portfolios as well as characteristics of product liabilities, describe how these risks may be realized from these asset/liability portfolios, and comment on possible interplay between multiple risk factors. As an example, for universal life products, presence of guaranteed minimum rates can be a source of interest rate risk, and possibly contribute toward policyholder behavior risk by causing persistent lower lapses under a prolonged low interest rate environment. Then the report should also comment on how these risks manifest itself in the company's financials from various lenses including economic capital, GAAP, statutory, etc. The discussion should identify timing of risk emergence under stress events, and demonstrate how the company will cope with these risks and their consequences in the company's financials.

Qualitative description of the risk management process should also be complete, covering all the components of the risk management cycle ranging from risk identification, measurement, management, and reporting.

A comprehensive report will help strengthen creditability of the content of the ORSA report as well the ERM program of the company.

Consistency

In all three sections of an ORSA report (i.e. Section I: Risk management policy, Section II: Insurer's assessment of risk exposure, and Section III: Group risk capital and prospective solvency assessment), the description of risk identification, measurement, and assessment of capital adequacy should be a coherent narrative across the three sections of the report. Here are some examples of consistency that should be maintained in the ORSA report:

- Any material risk factors identified in Section I of the report should be quantified in Section II. Similarly, quantification approaches used in Section II should be coherent to the quantitative measures used to determine capital adequacy in Section III.

- Results of risk quantification in Section II should support and comply with the risk appetite, tolerances, and limits defined in Section I. Moreover, for the capital and solvency assessment in Section III, the report needs to demonstrate that the risk profile, under normal and stress scenarios, remains within the bounds of the risk policies as defined in Section I; otherwise, there should be a clear remediation strategy to cure violations of these policies.

- Normal and stress scenarios used throughout three sections should be chosen consistently with appropriate

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rationales. Moreover, all modeling assumptions should be applied consistently to all the risk and capital analysis throughout the report.

A consistent report will make evident that different components of risk and capital management processes such as risk policy, risk management, and capital planning, are well coordinated, and, therefore, will help adding credibility to its content.

Comparability

Open-ended nature of the ORSA report poses an inherent challenge for a reviewer to compare one company's report with others'. Unless a common set of stress scenarios are defined by the regulators, direct quantitative comparison, similar to what is done for Federal Reserve's Comprehensive Capital Analysis and Review (a.k.a. CCAR) testing for bank holding companies, across the industry cannot be easily done. However, an ideal ORSA report should nevertheless strive to facilitate qualitative and quantitative comparison across the industry, and this comparison can be supported by transparency and ample granularity of the report.

For qualitative measures, the description of the risk management process and governance structure should be sufficiently thorough and clear for a reviewer to assess and determine qualitative ratings. For quantitative measures such as risk quantification, all the underlying assumptions (e.g. risk factor scenarios and modeling assumptions) should be provided in detail, so that appropriate adjustments can be applied in comparing results from several related companies.

A comparable report will increase transparency of the analysis supported by details, and facilitate peer comparison to gauge the company's practice relative to the industry best practice.

Consumability

The intent of ORSA should not be just a regulatory exercise, but to be embedded in the company's risk management culture and processes to further promote effective ERM within the organization. The ORSA report should be prepared to be read not only by regulators, but also by various stakeholders. These stakeholders could include internal personnel who contribute toward the risk management process and also others such as the board and possibly rating agencies who want to gain better insight into and evaluate the ERM practice of the company.

In order for the ORSA report to be consumable, the report should delineate capital and risk management processes currently used by the management today rather than a theoretic framework. For example, capital and risk measures used in the report should be the metrics that are actually used for business decisions such as capital allocation and performance measurements. Also, the capital forecast should be in sync with the company's annual financial and capital planning processes, and the remediation plan under stress scenarios should be consistent to expectations of senior management and the board.

Moreover, the report should be prepared in collaboration with, and well supported by various constituencies including finance, actuarial, and portfolio management, not simply by ERM as a silo. A collaborative work will naturally lead to a consumable report.

A reviewer should determine consumability of the ORSA report based on informativeness of the content as well as the way the report was prepared. A consumable report will help cultivate good risk culture within the organization and promote effective ERM with a company-wide support.

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Four C's for Reviewing an ORSA Report *By Joonghee Huh*

Conclusion

The four C's highlighted in this paper are not meant to be an exhaustive list of attributes that a reviewer should look for in an ORSA report. Depending on different businesses that insurers are involved in, the ORSA report will likely have numerous idiosyncratic components specific to each company, and these would need to be reviewed with various other considerations. However, these four C's are common key attributes that every ideal ORSA report should have, since they are good indicators of whether ORSA process and the ORSA report are accomplishing their intended goals.

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Creating a Win-win ORSA Review

By Max J. Rudolph

Enterprise risk management (ERM) can be an exercise in adding value or simply another in a long list of buzz words popular with directors, investors and rating agencies. It may even be seen as a roadblock and interventionist tool by company management. An appropriate balance must be maintained. What is the right mix of constraints versus growth, qualitative versus quantitative analysis, and short-term versus long-term decision making? These are all questions that the successful ERM process must resolve to build firm resilience. For an ORSA review to add value it must be completed in an ERM, rather than a traditional regulatory, context.

ORSA reviewers should ask questions, and expect answers that lead to follow-up questions and engaged discussions. What keeps the risk manager, senior management and the board up at night? Where have conflicts been present? Checklists can be used to start the process, but they are not sufficient. Reviewers should use common sense, with contrarian and skeptical comments encouraged. The ERM Actuarial Standards of Practice (ASOPs 46, 47) recently developed can help structure these reviews.

Company resources are tight, and ERM is viewed by some simply as a cost. When risk culture is embedded in a firm, both top-down and bottom-up, better decisions are made. Unfortunately, many Risk Departments are set up to fail by focusing entirely on constraints, being able to stop a project but not being viewed as a partner who understands how risks aggregate and interact to add strategic value. Reviewers of ORSA submissions should look for this involvement in the strategic process. Done right, the focus is on leading risk indicators and brainstorming between areas. This has added benefits for oversight and succession planning.

Unfortunately, many firms form their risk team primarily with junior technocrats collecting quantitative data rather than business experts and experienced practitioners who can qualitatively question specific practices before they get out of control. The same will be true with reviewers of ORSA filings.

Interactions between areas, transparency and concentration risk should be considered during an ORSA review. Look for the inclusion of a natural skeptic and contrarian who is supported by the CEO. Sometimes looking at a graph of recent trends is incredibly useful.

Incentives must be aligned throughout, based on a firm's board approved risk appetite and tolerance. Risk limits can then be set on a consistent basis. It's not common today, but risk managers should not receive a bonus so are not incented to complete a less diligent search for previously hidden risks. Incentive plans should be reviewed as part of the ORSA process.

Contrarian Thought

The best decisions are made after considering all sides of an issue. Acknowledging multiple viewpoints, and filling management teams and boards with members having broad perspectives, helps to avoid groupthink and yes-men. Staffing a team where everyone is expected to agree with the CEO is short sighted. Senior management should encourage skeptical thinking at all levels of the firm. At an insurer, for example, expertise needs to include knowledge of liabilities, investments, finance and operations. Few individuals can check all these boxes. Internal staff from another division, or external consultants (or rotating consultants), can bring different backgrounds and perspectives. It is often easier for an outsider to make waves than for someone who depends on a regular paycheck from a single firm. Charlie Munger, Vice-Chairman of Berkshire Hathaway, is a great example of this latticework approach. When Warren Buffett presents an opportunity, Munger has no fear about telling him what he really thinks. While Munger does not have the title, he clearly acts as the Berkshire CRO.

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A best practice leading indicator has risk officers rotating into other senior management roles. The reviewer should be skeptical in their approach but stop short of telling the management team how to run the company.

Concentration risk

One way to reduce overall risk is to diversify, spreading risk to limit the impact of a single event. This can avoid concentration around a specific risk such as product, geographic region, asset class, sales person, supplier, leverage, lack of liquidity, or decision making. One risk ORSA reviewers should consider is the risk that decision making is concentrated in a handful of people. As the SOA says, Risk is Opportunity, and in this case it can be a positive or negative. If the CEO drives all decisions, and many companies choose this path, the company is more likely to experience outlier performance, either better or worse. Many boards are hesitant to make waves and do not provide the oversight assumed by other stakeholders.

Time Horizon and Emerging Risks

It is very important for risk teams to consider exposures across various time horizons. The natural tendency is to put out the short-term fires first, but risks that are building should be highlighted in an ORSA review. Mitigation efforts get harder to implement, and more costly, as an event gets closer. Some crises take many years to become material and then dominate the discussion. Emerging risks potentially nearing a tipping point include federal entitlements, such as Social Security, and climate change. Small adjustments made a few years ago may have been sufficient, but prior inactivity increases the future challenge. Few risk managers think beyond the current tactical business plan extending 3-5 years into the future. The ORSA reviewer should consider risks that will be material beyond the normal regulatory cycle. By spending time thinking and assessing qualitatively over longer periods, a company develops competitive advantages with proactive development plans. Experienced practitioners can brainstorm a risk and how it might interact with the current risk profile, providing value without a large budgetary commitment.

Stress Testing

Sensitivity testing and scenario analysis should focus quantitatively on tactical plans, with up to 10 scenarios created to test specific risk exposures, including some that interact. Consistency is important but several should be considered wild cards, changing annually based on current concerns and developments. Risks that could change over longer periods of time should be documented, assessed and planned for. This can often be effectively considered qualitatively. For an insurer these could include higher/lower mortality/morbidity, an extreme earthquake, geomagnetic storms or an inflation spike. Companies should be creative in identifying emerging risks, thinking outside of their comfort zone to include such risks as climate change, regional conflicts, infectious diseases, negative impact of fracking operations and regional recessions. This is an opportunity for the ORSA reviewer to question the analysis. Combinations of these emerging risks should be considered, incorporating correlations and possibly copulas.

Consistent process

An ORSA reviewer should look for a consistent pricing methodology across all opportunities, both organic and external. For an insurer some examples might include inconsistent tax rates or capital charges, marginal versus stand-alone pricing, and inconsistent hurdle rates (opportunity cost). A best practice firm will measure itself consistently so that the capital allocator (generally the CEO) can compare opportunities.

The reviewer should look for evidence of efficient markets thinking as well as intrinsic value and qualitative risk considerations. If current conditions show markets outside their normal range, companies should consider this and document the potential impact to their risk exposures.

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Being overly focused on recent results leads to anchoring and poor decision making. Sometimes we misunderstand the drivers, such as yelling at bad behavior and celebrating good behavior only to have both revert to the mean during the next measurement period. Being aware of these human frailties associated with behavioral finance help risk managers avoid common mistakes.

Diversification and liquidity is plentiful when conditions are good, but when bad things happen correlations increase. For hidden and misunderstood risks, diversification, excess capital and risk culture play key roles in building resilience so a firm is able to fight through tough times.

Experience

The inexperienced ORSA reviewer will think differently than one who has lived through extreme events. Those who recently completed their technical training tend to focus on downside risk, while a little experience leads the reviewer to prefer optimization techniques and finally (generally after the "optimal" models blow up) the experienced reviewer tries to manage the risk of not meeting corporate goals and maintaining solvency. By retirement he is starting to understand that he knows what he doesn't know, and that it's still quite a bit. Experience and wisdom pays dividends, perhaps even more when the review involves aggregating risk exposures.

Conclusion

An ORSA reviewer wants the firm to succeed and be resilient when the inevitable downturns occur. A holistic assessment of risks, with aggregation across business units and risk silos while considering interactions, will lead to better understanding of risk exposures by the reviewer. Multiple perspectives, including those that are contrarian, should be noted and encouraged. Best practices will include those that consider longer time horizons and are involved in the strategic planning process.

Reviewers should be skeptical of those who say they have a complete understanding of their risks, as it generally means there are other risks hiding in the dark somewhere close by.

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A Literal Guide to ORSA Oversight

By Mike R. Celichowski

When it comes to appropriate board oversight of the Own Risk and Solvency Assessment (ORSA) process, there is a great deal of uncertainty and confusion around what is to be expected. While it is clear that boards of directors have accountability for ensuring an organization has an adequate enterprise risk management structure in place and that appropriate capital models are used for decision making, how this is to be completed has been left to individual organizations to determine. This has created angst in the minds of many directors, and even some regulators have expressed uncertainty around how the initial rounds of the ORSA implementation will progress. In such situations, it is often best to go back to basics to determine the true intent of the efforts and the most effective means of evaluating the established processes. For the ORSA process, this means taking a literal look at each of the words that make up the commonly used acronym.

Own

While there is little concrete guidance provided to date from regulators with respect to ORSA expectations, one thing that has been clear from the start is the desire for this process to be unique for each individual organization. Each insurance operation needs to look at its "own" circumstances and evaluate how various risks could impact the achievement of their overall goals and how those risks might jeopardize the ongoing capital position of the organization.

By looking at each organization individually, each ORSA will provide a unique snapshot of the risks faced and the potential impacts if those risks materialize. Much like a fingerprint or a snowflake, each ORSA will be somewhat different from any other. While this provides some beneficial flexibility in tailoring the ORSA process and resulting report to be useful for an organization, it also means an easy checklist of what is to be included is not feasible. There is no template to follow which will work for all organizations. In evaluating the appropriateness of an ORSA for an organization, it will be vital to assess whether that ORSA addresses the key areas of potential impact to that organization. The Board is uniquely positioned to provide independent evaluation of the areas of primary concern and focus to the organization based upon strategic discussions with the executive team. The Board will also need to determine for themselves the level of detail and the precision of the models they require to gain comfort on the risk positions faced.

Risk

In evaluating an organization's relative capital and performance strength, taking into account the risks that the organization faces is vital. Risk in these terms should be interpreted as the volatility of potential outcomes, be they broad economic and financial trends or company specific incidents, which could prevent the organization from attaining its goals. Even more importantly, it requires an identification of circumstances where the ongoing ability of the organization to continue operations could be put in peril.

While it is often stated that risk and opportunity are two-sides of the same coin, in the ORSA process the focus is primarily on the side representing downside risk. The organization must identify and articulate the circumstances and events which provide the biggest potential to derail the organization's plans and to potentially challenge the ongoing viability of operations. With respect to the ORSA report itself, the focus even within this risk context should be on financial risk implications. There can be a number of human resource, strategic, marketplace, and/or reputation impacts that have important long-range impacts, but for the ORSA process as currently contemplated, it is really primarily the financial manifestations of these risk events that matter. Everything needs to be considered in a mature Enterprise Risk Management (ERM) context, and this is a piece of the ORSA review

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required. The focus, however, will remain on the financial aspects, at least for the initial rollout of the process.

In assessing the alignment of the ORSA process for their organization, it will be important for the Board to examine risk at two levels. First, what are the areas of volatility that have the most potential impact on the organization and its financials? This is the identification of the risk set that needs to be considered, and once an initial set has been established, it is important to scrub that set to ensure nothing material has been missed. Once the risk set is agreed, the second stage is to develop the most plausible set of scenarios within which a given risk is likely to emerge. By creating these scenarios, the magnitude of risk impacts can be calibrated to the likely severity of the scenarios outlined. In addition, the scenario review can assist in establishing the likely correlation between several risks by identifying the likely common impacts of the contemplated risk scenario. If both the underlying risk set and the representative scenarios are comprehensively established, a solid risk environment is in place upon which the remainder of the ORSA effort can be completed. The Board needs to feel comfortable that this bedrock is firmly in place as the foundation upon which the final evaluations will be built.

Solvency

As noted above, the primary focus for the ORSA process as currently contemplated should be on the downside volatility for an insurance operation. The concept of solvency reinforces this focus, as it deals with the long-term viability of an organization as an independent, going concern. Solvency is the most basic requirement for any enterprise, particularly one in a highly regulated industry such as insurance, as the independence of the organization and the ongoing opportunity for the Board (rather than a regulator) to lead the efforts are based upon this requirement. Breaching solvency is also one of the most extreme situations to be considered, as there should be a number of early warning signs for an enterprise well before it approaches a solvency crisis in all but the most calamitous shock scenarios.

The solvency concept can help frame the scope of analysis required by the Board, as it helps establish the level of contingency planning needed within the ORSA itself. Taken to an extreme, any risk analysis runs the risk of spiraling out of meaningful usefulness by contemplating embedded contingency actions within embedded contingency actions. For ORSA, the solvency concept means examining whether the enterprise can survive a risk event and retain a positive capital position given its initial surplus level and its business plans. It does not need to consider what actions may be required following that event to adjust future business plans to attain long-range goals. It does not need to evaluate options to capitalize on opportunities the risk events may create. The Board simply needs to determine if the enterprise is adequately capitalized at present to survive a risk event or if changes to current business plans or the raising of additional capital is needed now to provide for such a contingency. The longer-term reactions are for a different day.

Assessment

Finally, the outcome of the ORSA process needs to be a definite assessment of the current capital position of the organization based upon its balance sheet strength; its projected business and strategic plans; the key exposures and risks faced, as well as the mitigation plans established to address those risks; and the overall readiness and ability of the Board itself and its senior executives to deal with stressed environments if and when they emerge. If the ORSA does not provide a solid conclusion on the capital position of the organization as well as the most troublesome risks that it will face from a solvency perspective, the Board needs to request refinements to the report.

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On the other hand, if the ORSA provides Management with the forum to convey confidence in the ongoing viability of the enterprise in a variety of risk scenarios, the Board should feel comfortable that the process has delivered on its primary goal. This assessment will of course need continual monitoring and periodic updating as circumstances change, but with a solid foundation of models and scenarios considered, the follow-on efforts should prove much easier for both Management and the Board to pursue.

Conclusion

The ORSA process is a challenging, but vital, piece of the overall ERM program for insurance operations. It provides the most concrete link between the Board and Management with respect to the ERM process, and it is likely the tool most commonly used by an organization to convey its risk management acumen to its regulators. As such, it will be crucial for both the Board and Management to have comfort on the completeness, appropriateness and adequacy of the ORSA report. The best, and simplest, way to gain that comfort is to focus on the literal components of what is requested. If these four key words have been addressed, the Board can feel good that they have done their part to ensure the organization can survive and prosper in the volatile times ahead.

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How to Review an ORSA: Thoughts for a Board Member's Initial Reading

By David A. Brentlinger

U.S. insurers are required to annually conduct an Own Risk and Solvency Assessment (ORSA) and to submit an ORSA Summary Report (the "Report") to their lead state regulator beginning in 2015. The ORSA is a self-assessment conducted by an insurer of the material risks associated with the insurer's own business plan and the sufficiency of capital resources to support those risks. The ORSA is a valuable element of an insurer's Enterprise Risk Management (ERM) framework, linking the insurer's risk identification, assessment, monitoring, prioritization, and reporting processes with capital management and strategic planning.

A company's board of directors is addressed twice in the ORSA Guidance Manual. First, the Report is required to be provided to the board of directors (or the appropriate committee of the board). Second, the manual states that an understanding of the risk appetite statement ensures alignment with risk strategy by the board of directors.

A board member of an insurance company will find great interest in his or her company's ORSA. The ORSA aligns well in supporting the board's governance role and the board's role of consulting with management on the strategic and operational direction of the company. Although successful risk management programs have been in existence for many years in most insurance companies, the ORSA will likely provide new information for many insurers in the form of the quantification of risk metrics and a more thorough documentation of the ERM framework. The document also addresses risk from the enterprise perspective, as opposed to a stand-alone legal entity perspective.

As board members read through their first Report, they might be asking themselves the question, "how do I know if this report is right?"

Overview

From a board member's perspective, "right" means the Report properly identifies the material risks facing the company in pursuit of its business plan, as well as management's responses to these risks. Board members can rely on four sources as they assess these questions:

- Board self-assessment
- Senior management
- Internal Audit's role
- Outside experts

After the Report is submitted, the lead state regulator may present feedback regarding the quality of the report. It is unclear how comprehensive this feedback will be. Since this feedback is provided after the report is submitted, it is not elaborated below.

Board Self-Assessment

The board is in a unique position in that it understands the strategic and operational direction of the company. Senior management has presented business plans and risk reporting to the board. The board has had the opportunity to ask questions, challenge, and critique these reports. The board member should expect the business plan and risk reporting underlying the Report to be consistent with the business plans and risk reporting previously reported to the board by senior management. The board member should also expect the Report to provide an unbiased view of risk, regardless of the impact that view may have on any of the company's various stakeholders.

The board should engage in discussions around two key risk statements found in the Report – the risk appetite and the risk tolerance statements. The NAIC ORSA Guidance Manual defines risk appetite as, "[T]he overall principles that a company follows with respect to risk taking, given its business strategy, financial soundness objectives and capital resources." There is nothing more strategic than understanding the company's appetite for accepting risk.

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This appetite fundamentally defines the types of products a company offers, how those products are priced, reserved, and capitalized, and even how the products are distributed and serviced. The board member should assess if the risk appetite as stated in the report aligns with the board member's understanding of the company's business plan and overall strategic direction.

The manual defines risk tolerance as, "The company's qualitative and quantitative boundaries around risk-taking, consistent with its risk appetite." Reading the Report, the board member may read terms reminiscent of a college statistics course. In their simplest form, risk tolerance statements define the amount of capital (or earnings, or other balance) the company is willing to risk losing based on a given likelihood of that loss occurring.

The likelihood of loss can be defined in terms of very remote events, such as events occurring once every two-hundred years. Thinking about losses in these terms is challenging, even for experts. One aspect of the ORSA somewhat simplifies this. The period for which these types of events need to be defined is over a "longer term business cycle (e.g., the next one to three years)." Thus, the assessment of risk is focused on what might occur over a limited horizon, rather than what might occur over a longer period of time.

The likelihood of remote events occurring is typically based on historical data. The board member should seek to understand why senior management believes the future will behave similar to the past. Black swan events should be considered, particularly in extremely remote event scenarios. The board member could also engage the Chief Risk Officer (CRO) in understanding the stated risk tolerances relative to events that have actually occurred, such as the company's losses from 9/11, the Great Recession of 2008 – 2009, or other macro-economic events.

Senior Management

The board can engage various audiences when assessing the quality of the Report – the Chief Executive Officer (CEO), the CRO, the Chief Actuary, the Appointed Actuary, and the key risk "owners." Depending on the size of the company, the board may delegate addressing some of these audiences to the CRO or, if applicable, to the company's Enterprise Risk Committee.

The CEO is responsible for establishing the risk-taking culture within the organization. The board should engage the CEO in discussing the Report, particularly on bigger ticket items such as the company's strategic direction and business plan, as well as the risk appetite and risk tolerance statements.

The CRO obviously plays a critical role in preparing the Report. The CRO attests to the best of his or her belief and knowledge that the insurer applies the ERM process described in the Report. The board member should seek to understand the support for the CRO attestation, as well as the CRO's overall assessment of the ERM process.

The Chief Actuary and the Appointed Actuary are also resources available to provide insights on the ORSA. In particular, the Appointed Actuary annually opines that reserves make adequate provision for future cash flows required under contractual obligations under moderately adverse conditions. There is a natural partial overlap of the work conducted by the Appointed Actuary and the CRO.

The CRO is generally not the one responsible for managing the risks of the company. The board could also meet with the owners of the material risks of the company to better understand the various key risk exposures and the processes in place to manage the risks.

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Internal Audit

Internal Audit provides its own approach to identifying material risks and ensuring those risks are appropriately managed within the enterprise. The board can leverage Internal Audit in several areas.

In companies where the CRO is not in charge of Internal Audit, the board member can use one as a check and balance for the other, where applicable. It may not be surprising, for example, that the CRO and Internal Auditor have a different prioritization of risks. The board can use this information for further discussions around risk management.

Section 2 and 3 of the Report includes quantification of risks that are based on company models. These models are usually complex by nature. Modeling risk is the risk that a model is not fit for the intended purpose, through its design, its coding, or its use. Internal Audit can help reduce modeling risk and prevent mistakes from occurring by defining and testing controls around the modeling function. Best practice suggests companies have defined governance standards and processes around their models that support the ORSA. This practice assures that models used for ERM purposes are considered "production" models and have the same degree of scrutiny and controls as models used for other important purposes, such as financial reporting.

Internal Audit can also be used to provide a systematic, disciplined approach to evaluate and assist the CRO to improve the overall effectiveness of the ORSA process.

Outside Experts

It is usually prudent to compare an important work product, like the Report, to an external benchmark for the purpose of establishing "best practices." However, given that ORSA is a brand new standard and the Report is confidential, there is no public information available for comparison purposes. The NAIC has not made the results of its two pilot programs public.

The standard is truly "principle-based" – quantitative work "should consider a range of outcomes using risk assessment techniques that are appropriate to the nature, scale and complexity of the risks", as well as "the insurer is permitted discretion to determine how best to communicate its ERM process." No two companies will have identically formatted reports.

Given the complexity and maturity of the company's ERM process, an outside peer review of the ORSA and the Report may provide value.

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By Their Works ye Shall Know Them–Evaluating Risk Culture for Own Risk and Solvency Assessment

By Dave Ingram and Alice Underwood

The March 2013 edition of the NAIC Own Risk and Solvency Assessment (ORSA) Guidance Manual indicates that at least two sections of the ORSA report should address risk culture.

Section 1 (description of ERM framework) lists "risk culture and governance" as the first of the five key principles that an effective ERM framework must incorporate, and states that the report should summarize, among other things, the extent to which the company has "a risk culture that supports accountability in risk-based decision making."

- Section 3 (assessment of risk capital and prospective solvency) should "consider how the Assessment is integrated into the insurer's management and decision making culture".

But what is culture, anyway?

Edgar Shein, a prominent writer on business culture, has said:

> "Culture matters because it is a powerful, tacit, and often unconscious set of forces that determine both our individual and collective behavior, ways of perceiving, thought patterns, and values. Organizational culture in particular matters because cultural elements determine strategy, goals, and modes of operating[1]."

He goes on to say that culture has three levels: espoused values, artifacts and underlying assumptions. Espoused values are what we say about the official culture. Artifacts are the observable actions of the organization. But the underlying assumptions are ultimately the driver of culture, according to Shein.

> "The essence of culture is then the jointly learned values and beliefs that work so well that they become taken for granted and non-negotiable"[1].

Therefore, beliefs about risks form the essence of risk culture. Risks are plural here because insurers face a number of different risks and the beliefs are not necessarily going to be the same for each of those risks.

Previous work of the authors[2] has described four different and largely incompatible underlying beliefs about risk. Some new research confirms that in many insurers, the beliefs do vary from risk to risk within an insurer[3].

The fundamental belief that sits at the heart of a risk culture has to do with the intensity of a risk. How likely is it that a risk will lead to failure to accomplish the organization's fundamental goals? The intensity of any particular risk might be seen as[4]:

1. High
2. Moderate
3. Low
4. Uncertain

This belief about a risk leads directly to the choice of strategy for addressing the risk: with risk belief and risk strategy we have the "underlying assumptions" and "artifacts" described by Shein. And the combination of belief and strategy can drive the organization's ultimate degree of success or failure in the risk business. Simply put, good results require alignment of risk strategy with risk belief.

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1 Schein, Edgar H. The Corporate Culture Survival Guide (2009)

2 Ingram, D Thompson, M & Underwood, A Rational Adaptation for ERM in a Changing Environment InsuranceERM.com http://goo.gl/RxCi78

3 Unpublished research to be presented at the ICA 2014. https://cas.confex.com/cas/ica14/webprogram/Session5862.html

4 These four beliefs are "pure" versions of the choices for belief. In many cases, the actual belief is somewhere between these extremes, e.g. "Moderately high" or "Mostly moderate but somewhat uncertain". This discussion will focus on the four "pure" beliefs only. A fuller exposition would also consider the hybrids.

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In addition to "setting the tone at the top," the board can contribute to accountability in the risk culture (as expected by Section 1 of the ORSA report) by holding regular (at least annual) discussions of risk belief with management. Such discussions, enriched by the board's outside perspectives and experience, help establish accountability and could reduce the degree to which the company later finds that it held incorrect beliefs about a risk.

A correct risk belief *should* lead to a correct choice of risk strategy, but that is not guaranteed. Many insurers struggle mightily with risk strategy selection because most of the literature on ERM suggests using only a single risk strategy – one best suited to the belief that risk is moderate. This standard approach to ERM features risk appetites, risk models and risk reward optimization.

Section 3 of the ORSA report must address how the assessment of risk capital and prospective solvency is integrated into the insurer's management and decision making culture. To do this, we must understand the beliefs underpinning the risk culture, and form a judgment about whether the firm's risk strategy (and the resulting capital and solvency levels) is properly aligned with those beliefs.

One direct way to accomplish that task is to start with an examination of risk strategy. The tables below provide brief, summary descriptions of four strategies that have been observed by the authors as applied to underwriting and investment risks (the two major risks for most insurers). Examples such as these can help identify the actual risk strategy for these important risks.

Four Underwriting Risk Strategies

RISK TRADING ("Low" risk belief)	Pricing controls with flexibility and exception process. Decentralized decision making close to the business. Limit system more guidelines than rules. Risk appetite is flexible and takes into account the potential return for the additional risk.
RISK STEERING ("Moderate" risk belief)	Underwriting policies and procedures clearly documented. Major decisions made at corporate headquarters. Few exceptions to the rules will be allowed. Detailed limit system, tied back to clearly stated risk appetite. High degree of modeling; models consulted for most risk-related decisions. Capital allocation, possibly down to the individual risk level, is often part of this strategy.
LOSS CONTROLLING ("High" risk belief)	Strict PML limits. Significant safety margins added to risk model outputs. No exceptions or limit breaches are allowed. Risk appetite may not be communicated for fear that it will encourage excessive risk-taking. Strong reluctance to accept new types of risk.
DIVERSIFICATION ("Uncertain" risk belief)	This strategy uses authority limits and diversification targets. Authority limits relatively low, requiring involvement of high-level management in any large underwriting decisions. Diversification targets may be formal or informal. Lines of business and territories may be quite diverse. Quick to drop or add a new line of business or territory. Little interest in models or modeling.

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Four Underwriting Risk Strategies

RISK TRADING STRATEGY („Low” risk belief)	Market-based risk system, focused on quarterly income. Favor high-risk, high-return investments such as equities and hedge funds. Reliance on the presumption that there is little correlation between investment and underwriting risks.
RISK STEERING STRATEGY ("Moderate" risk belief)	Favor investment in indexes since it is thought to be very unlikely to find any alpha. Tend to have portfolio-based risk limits using VaR or TVaR, rather than simple asset-based risk limits. Typically incorporates a quantitative view of correlation of investment and underwriting risks based upon a detailed study, and may choose investments to complement the underwriting portfolio.
LOSS CONTROLLING ("High" risk belief)	Traditional portfolio limit and investment policy statement. Favor a very low-risk investment portfolio, frequently featuring high-quality bond investments.
DIVERSIFICATION ("Uncertain" risk belief)	Little formal strategy other than maintaining a varied portfolio with diversification targets. High degree of involvement of senior management in large investment decisions.

After identifying the risk strategy choices for the major categories of risks, it is possible to assess whether this aligns with management and board beliefs about the risk environment.

Where there is a misalignment between risk beliefs and risk strategy (and the metrics this strategy entails), assessments of required risk capital and prospective solvency are likely to be poorly integrated into the insurer's management and decision making culture. A misaligned ERM framework can become a sort of "entertainment system"[5] that generates data and reports without affecting the operations of the company.

But once such misalignments are detected, there is opportunity for improvement. A lively discussion between the board and management may ensue, shedding light on beliefs that have gone unspoken and strategies that have become habits. Once the board and management have jointly examined current risk beliefs and risk strategies and reached a working consensus, they can form statements of espoused values[6] about risk to communicate the intended risk culture of the firm. That is the appropriate point at which to set the "tone at the top" about risk culture.

If this investigation and discussion leads the board and management to conclude that the predominant belief or strategy for an important risk must change, then they must recognize that those are fundamental elements of risk culture – and that simply stating new espoused values is not enough. To transform these fundamentals, they must undertake the slow and difficult process of organizational culture change.

5 Ingram, D A Giant Risk Management Entertainment System, Willis Wire (2013) http://blog.willis.com/2013/05/a-gigantic-risk-management-entertainment-system/

6 Shein's third element of culture.

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By Their Works Ye Shall Know Them…*By Dave Ingram and Alice Underwood*

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Risk Culture Assessment Based on ORSA

By Kailan Shang

Risk culture is the key to the organic growth of risk awareness and risk management.

Importance

Risk culture reflects the attitudes and behaviors of a group of people regarding risk taking and risk management. It is the essence of a risk management system. No matter how good risk management rules and models are, without a good risk culture, they are difficult to create value for the company.

The importance of a healthy risk culture in effective risk management has been increasingly recognized. Toxic risk culture of some large global banks caused huge losses such as the London Whale and the Libor scandal in recent years. The Financial Stability Board issued a consultative document on the supervisory interaction with financial institutions on risk culture[1] in late 2013. It considers the failures to have a good risk culture as a root cause of financial crises, either systemic or idiosyncratic. In 2008, CEIOPS issued a consultation paper on ORSA[2] which states that a strong culture of risk management is the key underlying feature of the ORSA process. In the NAIC ORSA guidance manual[3], risk culture that supports risk-based decisions is emphasized. In the IAIS Insurance Core Principle 16 on enterprise risk management[4], it also talks about embedding risk culture in the company.

Rating agencies also consider risk culture as a key component of effective risk management. In the S&P's evaluation criteria for the ERM practices of insurance companies[5], risk-management culture is the first of five areas to be assessed. Risk-management culture is the degree to which risk management is integrated with corporate decision-making. It can be considered as the risk culture at the top level of the organization.

A healthy risk culture can foster the improvement of risk management from the inside of an organization.

1. People monitor and manage risk actively and consistently.
2. More risks are likely to be identified.
3. Risk issues can be escalated quickly in the organization.
4. Decision makers can get risk information timely with high quality.
5. Risk adjusted metrics are used to measure the performance.

Challenges

When reviewing an ORSA, assessing the risk culture is a crucial but challenging task. ORSA reports may vary a lot from company to company and may not provide all information that is needed for risk culture assessment.

For large companies, especially global companies, there may be material differences in risk culture among business units or functions. Sometimes, a comprehensive assessment of risk culture needs to be done at a more granular level, for each business unit and function. However, ORSA reports may not give you that level of details.

ORSA reports may also focus on the target risk culture that is written in the risk policies but may not be achieved in reality. They may not tell the degree to which people in the organization embrace the risk management policies. It is also hard to know the details of risk management practices from the reports. Those are valuable information for understanding the gap between the target risk culture and the actual risk

[1] FSB, "Increasing the Intensity and Effectiveness of Supervision: Guidance on Supervisory Interaction with Financial Institutions on Risk Culture." (2013) http://www.financialstabilityboard.org/publications/c_131118.pdf

[2] CEIOPS, "Issues Paper: Own Risk and Solvency Assessment." (2008) http://eiopa.europa.eu/fileadmin/tx_dam/files/consultations/IssuesPaperORSA.pdf

[3] NAIC, "NAIC OWN RISK AND SOLVENCY ASSESSMENT (ORSA) GUIDANCE MANUAL." (2013) http://www.naic.org/documents/committees_e_orsa_wg_related_docs_guidance_manual_2013.pdf

[4] IAIS, "Insurance Core Principle 16 Enterprise Risk Management." (2010)http://www.iaisweb.org/__temp/ICP_16_Enterprise_Risk_Management__standards_and_guidance_material.pdf

[5] Standard & Poor's, "Evaluating the Enterprise Risk Management Practices of Insurance Companies." (2005)

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culture. It can be evaluated by interviewing with board members, senior management, risk professionals, and other employees.

Assessment

Ideally risk culture assessment is a part of ORSA. However, it is not specified in most regulatory requirements for ORSA. Even though reviewing an ORSA is not enough for a full assessment of risk culture, it can still give us some insights about it. Below is a list of questions that we may find answers from an ORSA report. They can be part of the criteria for risk culture assessment.

- Is there a clear and consistent statement of the company's risk appetite and risk tolerance?
- Do risk committees include key stakeholders who are the final decision makers?
- When setting business strategies, do senior risk managers provide inputs and have a big influence on decision-making?
- Are risk adjusted measures used for making business decisions?
- Are risk adjusted measures used for evaluating the performance of senior management?
- Are there enough risk professionals in the company?
- Are there enough communication and training about risk management in the company?
- Are newly identified risk issues escalated to senior management quickly?
- Is whistle blowing encouraged and appropriately rewarded?
- Are employees encouraged to recognize their biases and correct them?

After gathering information, risk culture needs to be rated. As most of the assessment is qualitative, it is difficult to build a scoring system with many levels. Simple scoring systems are recommended to use. For example, risk culture can be rated as weak, standard, or advanced, with an increasing level of healthiness.

Weak: People passively follow risk policies and rules set up in the organization.

Standard: People understand the importance and value of risk management and are encouraged to help improve risk management practices in the organization.

Risk Culture Evaluation Criteria: An Example	**Weak**	**Standard**	**Advanced**
The company has a clear and consistent risk appetite statement.	Maybe	Yes	Yes
Risk committees include final decision makers.	Maybe	Yes	Yes
Senior risk managers have a strong influence on strategic planning.	No	Maybe	Yes
Risk adjusted measures are used for informed decision-making.	Maybe	Yes	Yes
Risk adjusted measures are used for performance measurement.	No	Maybe	Yes
Enough qualified risk professionals are hired.	No	Yes	Yes
Enough communication and training on risk management.	No	Maybe	Yes
Formal and effective risk issue escalation policy and process.	Maybe	Yes	Yes
Whistle blowing is encouraged and rewarded.	Maybe	Yes	Yes
Employees are encouraged to recognize their biases and make correction.	No	Maybe	Yes

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Advanced: People actively participate in all aspects of risk management and cooperate to get to the company's target risk profile.

Risk culture can be rated based on criteria like below.

Here it is assumed that the only source of information is ORSA reports. If other information is available through interviews with senior management for example, the list of criteria can certainly be expanded.

Conclusion

Risk culture is a key element of effective risk management. An ORSA may not assess risk culture separately but contains some key information that can be used for a high level assessment. The best practice is to integrate risk culture assessment with ORSA.

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Regulatory Review of ORSA Framework

By Laura A. Maxwell

Own Risk Solvency Assessment (ORSA) reports are an important way for regulators to ensure that insurance companies are managing their enterprise-wide risks. Each company's report will need to be appropriate for the nature, scale and complexity of the company's risks. Although the details will vary significantly between companies, the list of items to be discussed should be similar. Section 1 of the NAIC ORSA Guidance Manual provides five key principles for an effective Enterprise Risk Management (ERM) framework. Companies' ORSA reports will need to demonstrate how their programs meet the five key principals. In addition to the principles, companies may want to include items from the NAIC's report on their pilot programs. Each principle is discussed below as well as items that regulators will need to consider during their assessments.

Risk Culture & Governance

NAIC key principle: "Governance structure that clearly defines and articulates roles, responsibilities and accountabilities; and a risk culture that supports accountability in risk-based decision making." [1]

The NAIC suggested that insurers consider including a table identifying the risk owners, the assigned risk, their role and responsibility, and to which committee/department/chief officer they report on their risk management and a flow chart explaining control processes.[2] The table and flow chart are a good start to articulate roles, responsibilities and accountabilities. The regulator will need additional detail on the company's risk culture. Some items to discuss include:

- What is risk management's role? Is this a purely advisory role or does risk management have authority to execute its mandate?
- Is there regular interaction with the Board?
- Are risk management objectives coordinated with business goals?
- Does company incentive compensation support risk management objectives?
- Are risk management policies well documented and distributed throughout the company?[3]

The regulator will need to review these items and make sure roles are clearly defined, risk management is not simply a compliance function and that the entire company is involved with risk management.

Risk Identification & Prioritization

NAIC key principle: "Risk identification and prioritization process that is key to the organization; responsibility for this activity is clear; the risk management function is responsible for ensuring that the process is appropriate and functioning properly at all organizational levels."[4]

Standard & Poor's lists the following as important risks currently facing insurers.

- Reserve risk—risk that reserves will develop adversely
- Catastrophe risk—both natural and man-made
- Reinsurance-recoverable risk (i.e., counterparty credit risk)
- Equity risk arising from embedded guarantees in insurance products

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1 NAIC Own Risk Solvency Assessment (ORSA) Guidance Manual as of March 2014, page 6.

2 NAIC Own Risk and Solvency Assessment (ORSA) Feedback Pilot Projects Observations of the ORSA (E) Subgroup 2012-2013 Feedback to Industry, page 3.

3 Standard & Poor's Evaluating The Enterprise Risk Management Practices of Insurance Companies, pages 5-6.

4 NAIC Own Risk Solvency Assessment (ORSA) Guidance Manual as of March 2014, page 6.

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- Interest rate risk, which stems from historically low interest rate environments and could add significant risk if rates rise or fall
- Insurance concentration and event risks
- Underwriting cycle management
- Corporate governance
- IT data security risk[5]

The NAIC suggests that companies discuss risks associated with intercompany dependencies and identify priority ranking of the material risks.[6] Responsibility for risk identification should be discussed as part of the risk culture and governance discussion. Regulators need to review that the list of risks is comprehensive for the nature, scale and complexity of the company's risks. The ranking of the risks will also vary significantly by company.

Risk Appetite, Tolerances & Limits

NAIC key principle: "A formal risk appetite statement, and associated risk tolerances and limits are foundational elements of risk management for an insurer; understanding of the risk appetite statement ensures alignment with risk strategy by the board of directors."[7]

For each of the risks identified, insurance companies will need to provide the corresponding risk tolerance statement and limit. Risk tolerance statements need to provide overall quantitative and qualitative tolerance levels. The tolerance statements should reflect the company's strategy and business plan and should be determined for the same time horizon as the corporate strategic plan. The regulator will need to review

- Do risk tolerance statements set boundaries for how much risk the organization is prepared to accept?
- Is risk tolerance determined in line with the company's long-term strategic plan?
- Is the risk appetite set by the Board?
- Are tolerance statements clearly defined?[8,9]

Regulators will also need to review explanations of any changes that have occurred in risk limits, appetites and tolerances as well as who approved the change and the decision process for implementing the change.[10]

Risk Management & Controls

NAIC key principle: "Managing risk is an ongoing ERM activity, operating at many levels within the organization."[11] The NAIC suggests that risk mitigation be discussed in addition to risk monitoring.[12] An ERM framework needs to be able to adjust for change. A feedback loop needs to be established to formally review incidents and support a culture of learning and continuous improvement.[13] Regulators will need to review

5 Standard & Poor's Evaluating The Enterprise Risk Management Practices of Insurance Companies, page 7.

6 NAIC Own Risk and Solvency Assessment (ORSA) Feedback Pilot Projects Observations of the ORSA (E) Subgroup 2012-2013 Feedback to Industry, page 4.

7 NAIC Own Risk Solvency Assessment (ORSA) Guidance Manual as of March 2014, page 6.

8 International Actuarial Association, Practice Note on Enterprise Risk Management for Capital and Solvency Purposes, August 11, 2008, page 68.

9 Standard & Poor's Evaluating The Enterprise Risk Management Practices of Insurance Companies, page 5.

10 NAIC Own Risk and Solvency Assessment (ORSA) Feedback Pilot Projects Observations of the ORSA (E) Subgroup 2012-2013 Feedback to Industry, page 2.

11 NAIC Own Risk Solvency Assessment (ORSA) Guidance Manual as of March 2014, page 6.

12 NAIC Own Risk and Solvency Assessment (ORSA) Feedback Pilot Projects Observations of the ORSA (E) Subgroup 2012-2013 Feedback to Industry, page 2.

13 International Actuarial Association, Practice Note on Enterprise Risk Management for Capital and Solvency Purposes, August 11, 2008, page 36.

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- Does the company monitor significant risks on a regular basis?
- Is there a clear process for managing risk or is it ad hoc?
- Is the risk monitoring process accurate?
- Are there consequences for exceeding risk limits?
- What is the review process after a loss situation?[14]

Regulators will need to determine if the process allows the insurance company to react quickly to any risk limits being approached as well as the ability to continually refine and improve their ERM program.

Risk Reporting & Communication

NAIC key principle: "Provides key constituents with transparency into the risk-management processes and facilitate active, informal decisions on risk-taking and management."[15]

The regulator will need to review the effectiveness of the feedback loop.

- Is there an establishment of thresholds for reporting significant issues/incidents?
- Is there a process for escalation of issues to various levels of management?[16]

Lack of common terminology can undermine the effectiveness of the ERM program. The regulator will need to confirm that key constituents understand each other.

- Is there a universally understood risk rating system that defines high risks versus low risks?
- Are there standard templates for use across the insurance company?[17]

Another item to review is how information is distributed to the key constituents. Companies should provide an easy to review concise report with supporting information as needed. Company reports may start with a top ten list of residuals, a table of key risk indicators, heat maps or significant progress reports.[18]

Regulatory review of a company's framework is not going to be a simple checklist, however the items and questions provided above will cover much of the review. Regulators will need to determine if the ORSA report discussion of the items listed above demonstrates a framework that is appropriate for the nature, scale and complexity of the company's risks.

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[14] Standard & Poor's Evaluating The Enterprise Risk Management Practices of Insurance Companies, page 7.

[15] NAIC Own Risk Solvency Assessment (ORSA) Guidance Manual as of March 2014, page 6.

[16] International Actuarial Association, Practice Note on Enterprise Risk Management for Capital and Solvency Purposes, August 11, 2008, page 36.

[17] International Actuarial Association, Practice Note on Enterprise Risk Management for Capital and Solvency Purposes, August 11, 2008, page 19.

[18] International Actuarial Association, Practice Note on Enterprise Risk Management for Capital and Solvency Purposes, August 11, 2008, page 27.

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How to Review an ORSA

By Patrick Kelliher

How may a regulator review an ORSA? Or an external consultant validate the ORSA? By its very nature the ORSA will be bespoke to the firm in question. There is no "one size fits all approach" to reviewing ORSAs but there are some common themes which should be born in mind.

ERM framework

An ORSA is only going to be as good as the insurer's underlying ERM framework. If this does not capture risks properly then there will be gaps in the risk assessment part of the ORSA; while any assessment of solvency is moot if controls are weak. An ORSA review should start with the ERM framework.

A key question is "how are risks identified?". There review should consider what processes are in place to identify both the risks arising with new insurance products and asset classes, and changes in the nature of existing asset types and liabilities. Another mark of the quality of the ERM framework and of risk identification is the extent to which emerging risks are considered and tracked.

Having identified risks, a good ERM framework should monitor and report on these to senior management. Risk reports should also be reviewed to gauge the quality of risk reporting and how risks and issues are escalated.

Finally, an ERM framework is useless if it is not complied with. An ORSA review should consider internal audit reviews and compliance reports to gauge the strength of the framework.

Reviewing current risk profile

Having gauged the adequacy of the underlying ERM framework, the next step would be to gauge the quality of the current risk assessment which is the starting point for the ORSA. It is important to consider the granularity of the assessment. It is not sufficient to just consider equity risk for example – there needs to be consideration of components such as stock specific risk, beta, dividends etc.

The solvency assessment element of the ORSA will generally be based on economic capital models of risks. A good ORSA will recognize the limitations of these models. While these may not be material at present, the review should consider if they may be going material forward.

Operational risk requires particular attention. It is a very diverse category, there is usually a lack of quantitative data and hence a reliance on subjective scenario analysis. The reviewer should look for evidence that a wide range of risks have been considered and that the scenarios have been subject to rigorous review and challenge.

The review should also consider how well defined benefit pension scheme risks are covered. Pension scheme risks may not be fully addressed in Pillar I but the ORSA should reflect this.

Projecting risks and solvency

Starting from the current risk profile, the ORSA will project this profile and the associated solvency requirements over the medium term. This projection will reflect the insurer's strategy for new business, investments, bonus distributions and dividends. The review should consider how well these projections reflect these plans.

For new business, the review should consider how well existing risk models address the risks associated with new business plans. An insurer entering the variable annuity market for example is likely to encounter a complex mix of basis, implied volatility and other risks. The review should consider whether the insurer's models of these risks are fit for

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purpose. Consideration should also be given to the volume of new business – significant growth could place a strain on underwriting and increase the uncertainty around insurance risks. It can also place a strain on processing and lead to increased operational risk losses.

Other strategic initiatives could involve sales and acquisitions of business units as well as outsourcing which can give rise to new risks which the ORSA should capture.

The insurer's plans will also encompass investment strategy. New investment classes such as hedge funds can give rise to new risks which existing models may not cope with but which the ORSA should capture. The review should also consider the variability of cash returns covering floating rate obligations under swaps and borrowings.

Risk strategy may envisage increased hedging and risk transfer but the review should consider whether associated residual risks such as basis risk have been properly reflected in the assessment.

The bonus strategy for participating business can have a significant impact on solvency. The review should consider how assumptions for bonus distribution tie in with what has been promised to policyholders.

The ORSA should reflect planned dividends as well as interest on debt obligations. In terms of maturing debt, the ORSA may assume this is rolled over. If so, the terms assumed for new debt issues should be reviewed.

ORSA solvency projections need to reflect two different perspectives of solvency: the insurer's own assessment of economic capital requirements based on its risks and models; and Pillar I regulatory capital requirements. There has been convergence between the two bases under Solvency II but there will still be residual differences between the two calculations which the ORSA should be able to reconcile.

Stress and Scenario testing

A single base projection will rarely be enough to assess future solvency needs: it should be supplemented by alternate projections in a variety of scenarios. Many insurers may project own funds on a stochastic basis. While useful in highlighting the sensitivity to different market conditions, correlation and other assumptions underpinning the stochastic model should be reviewed and challenged.

Stochastic models should supplement not replace analysis of holistic scenarios encompassing market and non-market risks. A good ORSA will consider a range of economic (e.g. oil shocks) and other scenarios (e.g. pandemics); and their impact across all risk categories. The review should consider if there are any risk categories which may be impacted by the scenario but which have not been considered by the ORSA.

Scenarios will impact on new business. Some will have a negative impact on sales, but the ORSA should also consider upside scenarios (e.g. a competitor leaving the market) which boost new business as this could place a strain on solvency.

The review should check if a wide range of subject matter experts was consulted in deriving scenarios to ensure they are as realistic and comprehensive as possible. It should also consider the review, challenge and sign-off process to gauge how scenarios were quality assured.

Often economic and other scenario impacts are derived by "gut feel" in scenario workshops and may not stand up to scrutiny. Comparing these against internal model distributions can help improve rigour of scenario assumptions, while helping meet Solvency II validation and use test requirements.

Management actions

The ORSA will assume management actions as part of its response to adverse scenarios. The review should consider whether the timescales assumed are reasonable. Markets

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may fall faster than expected while cuts to bonuses on participating policies may also be held up by the governance process for these.

The review should also consider market access. In falling markets put option protection may become prohibitive. Similarly, a general insurer may not be able to secure replacement catastrophe reinsurance after a catastrophe.

Last but not least, the review should consider the risk of legal and regulatory challenges to proposed actions such as bonus cuts.

Liquidity risk

ORSA projections typically focus on the amount of assets versus liabilities, but there is another dimension to solvency and that is the liquidity of assets and liabilities. A good ORSA should project liquid resources and requirements allowing not just for expected outflows such as maturities but also potential outflows in stress conditions e.g. mass surrenders. It should also reflect potential liquidity strains from margin calls on derivatives.

The insurer should have contingency funding plans to mitigate liquidity strains but the review should validate these. Planned sales of marketable securities should be validated against the size of the market in stressed conditions. For instance, the market for many fixed income securities disappeared during the financial crisis in 2007-2009.

The insurer may look to access repo funding as part of its contingency plans, but the financial crisis highlighted that repo markets may seize up for all but the highest quality assets.

The review should also consider liquidity risk reporting to gauge whether management action timescales assumed are reasonable.

Conclusion

The review should ensure that the ORSA is not a stand-alone assessment but flows from and is consistent with the strategy and plans of the insurer. It should also look for evidence of a deep understanding of risks faced; a framework to control these as far as possible; and robust models for assessing the capital required to cover residual risks. There is a considerable amount of information required for such a review, but a robust ORSA process should ensure that source documents are identified and readily available. Finally, reviewing an ORSA is not a trivial task but will yield a deep understanding of the insurer's risk profile and the strength of its risk management framework.

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Reviewing a Summary ORSA Report: The Score Card Approach

By Terence Narine

Introduction

This paper is in response to a call for papers on ORSA reporting review by the Joint (SOA/CAS/CIA) Risk Management section. The objective is to present an approach that allows regulators and other interested parties to compare ORSA summary reports across various insurance companies. ORSA has a broader scope than traditional risk management. It is both qualitative and quantitative in its mandate making it difficult to compare across organizations. It encompasses more than Solvency measures, Stress Testing and Risk Based capital adequacy. This paper focuses on development of a Score Card that will allow regulators, and other interested readers to benchmark and compare different insurers on a common platform.

Questions to be Asked

Any review of an ORSA summary report must begin with a series of questions. Starting with high level questions and then drilling down into more specific questions will provide a deeper understanding of the risk profile of the organization. Where answers are less than adequate, areas for improvement may be highlighted. In time expert judgment will allow more direct comparison across companies with similar and dissimilar profiles.

Does the Report Address all Risks

At the highest level, does the summary report address all current and potential risks faced by the organization? This is the primary question to be asked. All subsequent questions fall out of this basic consideration. The complexity of the organization including product lines, organizational structure and geographical locations will all drive the level of questioning that follows.

Risk Mitigation

How is the company addressing its' risk mitigation activities? Is it using reinsurance to reduce risk and need for capital? Is it addressing only current risks or future potential risks as well? Is it mono-line? Or multi-national? And is it reporting on just its' local domestic risk or across the board? Have some subsidiaries been excluded in the ORSA risk profile and summary report?

Does the company have access to adequate sources of capital should capital infusion be necessary if the risk profile changes?

Product Lines

What exposure does the company have to various product lines? Are some lines more risky than others? Is the mix of business changing over time? Is the company chasing more risky business? If so, is it seeing a commensurate increase in profits relative to other organizations with similar risk profiles? Does the company have plans for acquisition or divesture of certain product lines?

Stress-Testing

What are the results of the latest stress tests and have they been included in the summary report? Are there areas of weakness in the stress tests that still need to be addressed by management? How will the stress tests change going forward?

Determination of whether the stress tests are comprehensive enough may focus on backward-engineered scenarios and how the scenarios chosen score relative to other insurers or past scenario testing of the insurer.

Subjective Risk

Some risks by their very nature are hard to quantify and assess. Risks like reputation, market, foreign exchange and liquidity can be more open to subjectivity or simply ignored in the risk management process. How have the subjective and hard to quantify risks been addressed? Has the insurer provided written policies to address these risks? Or have they simply ignored them?

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The Score Card

This paper proposes that a Score Card approach be used to assess the ORSA summary reports of various insurers. Underwriters assess an applicant for life or health insurance (ObamaCare aside) using a series of debits and credits to determine the risk of the applicant for insurance. A Score Card would take the same approach in providing a consistent and fair way to benchmark insurance company risk. By setting a pass target, a tally of the score at the end of the review tells whether the insurer has passed the threshold or not for the given reporting period.

The Score Card addresses the regulatory proclivity for comparability while still leaving the ownership of the risk process in the hands of the company. However, companies realizing they are being judged on a level benchmark across the industry will find motivation to score as high as possible in each of the sections. While a Score Card is not a new concept in risk assessment, applying it to ORSA summary reports provides a level benchmark for judging similar organizations.

The tasks apart from reading the summary report will be to score each section of the Score Card and thus paint a picture of the completeness of the ORSA report. It will also allow highlighting of any missing or under-represented risk profiles.

The Score Card becomes the criteria the reviewer uses to evaluate the amount of attention to devote to the exercise. Attention would also be given to areas where the Score Card points out weaknesses that need to be addressed.

The Score Card is the chassis that determines whether the ORSA report provides adequate insight into an insurer's ERM process and risk profile. The insurer would be expected to identify all key material risks and management's viewpoint in the report. Marks would be awarded for completeness compared to other similar insurers (mono-line/multi-line/international/Life/Health/Casualty). By scoring the summary report, it creates a framework for review and determination of what's missing. Reviewers would then be charged with the responsibility of alerting management to what's missing in the report so that future reports may be improved upon.

Regulatory reviewers would take the approach of scoring the ORSA summary report and providing recommendations on ways to improve scores or address risk concerns.

While the Score Card approach requires some amount of judgment, after a few years, the experience and ability of regulators and others to score items consistently should be improved. Also, regulators will be able to examine how the risk culture of the organization is changing over time. This may allow them to sound alarm bells when necessary. The Score Card and review will be a work in progress that will change and be refined over time.

The ASSESSED SCORE is the reviewer's own expert opinion on how the organization has addressed an individual risk. The MAXIMUM SCORE is the reviewer's estimate of how much weighting to provide to each category of risk. The Total line at the bottom adds each of the individual risks in each column. Individual reviewers may set their own acceptable pass rates on the quality and completeness of the summary report. There are too many potential risks to include them all in the table. The Allocated Capital if available, quantifies how much capital the organization has dedicated to each of the individual risks. If available, it allows the reviewer to compare to previous reports for trending from year to year. It also allows the reviewer to benchmark against other similar organizations. Finally, the COMMENTS/CONCERNS section provides discussion on areas of further review and exploration.

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Example Score Card

The table below shows an example of what a Score Card may look like:

RISK	ASSESSED SCORE	MAXIMUM SCORE	ALLOCATED CAPITAL	COMMENTS CONCERNS
Business Risk	3	4	$10 million	PASS
Market Risk	7	9	$5 million	PASS
Geographical Risk	1	1	$2 million	PASS
Interest Rate	6	8	$20 million	FAIL
Risk Culture	4	4	$2 million	PASS
Ownership Risk	2	3	$2 million	PASS
Organizational	5	5	$3 million	PASS
Mono-line	N/A	N/A	N/A	N/A
Multi-Line	8	9	$20 million	PASS
Product Lines	10	12	$30 million	PASS
ORSA and ERM	2	2	$1 million	PASS
Risk Policies	5	5	$2 million	PASS
Underwriting	6	8	$6 million	PASS
Investment	3	4	$7 million	PASS
Claims	8	10	$12 million	FAIL
ALM	2	3	$15 million	PASS
Operations	4	5	$22 million	PASS
Reinsurance Counterparty	4	4	$4 million	PASS
Governance	1	1	$2 million	PASS
Risk Reporting	1	1	$1 million	PASS
Risk Compliance	1	1	$1 million	PASS
Risk Controls	2	3	$1 million	PASS
Foreign Jurisdiction	N/A	N/A	N/A	N/A
Credit Risk	1	1	$9 million	PASS
Liquidity Risk	2	3	$2 million	PASS
Assessment Methods	0	1	$1 million	Needs Improvement
Model Validation	1	1	$1 million	PASS
Model Calibration	1	1	$1 million	PASS
Double Gearing Capital	0	1	$1 million	Further Discussion
V-A-R, Tail VAR	7	7	$20 million	PASS
Probability of Ruin	6	7	$20 million	PASS
Stress Test Results	4	5	$20 million	PASS
Total	108	129	$243 million	PASS

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Conclusion

This paper has proposed a potential approach to ORSA review and benchmarking. The paper cannot possibly cover every question a regulator or Board of Directors may want to ask about an organization's ORSA risk profile. Over time as the art of Score Carding improves, the science surrounding it may become more robust.

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