
JOURNAL OF INSURANCE REGULATION

Cassandra Cole and Kathleen McCullough
Co-Editors

Vol. 34, No. 9

**Own Risk and Solvency Assessment:
Origins and Implications for Enterprise Risk
Management**

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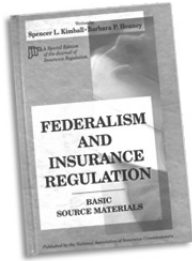
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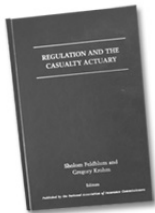
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Own Risk and Solvency Assessment: Origins and Implications for Enterprise Risk Management

David M. Pooser*
Paul L. Walker**

Introduction

Solvency Modernization Initiative

Although the debate about the causes of the 2008 financial crisis is unsettled, the crisis caused many regulators to rethink regulation of the global financial system and industries such as banking and insurance. Furthermore, the liquidity crisis and federal takeover at AIG led to an additional critical review of how insurance is regulated and how a group or holding company view of an insurance enterprise might be valuable. Some regulators were concerned that the failure of an insurance company might lead to a “contagion effect” of weakening financial status or even company failures within the insurer’s group or of other firms associated with that insurer (NAIC 2010; NAIC 2015a).¹

1. Even before the financial crisis, the NAIC was continuing to move toward risk-focused exams. That earlier push included emphasis on culture, governance, risk assessment and control environment. These were items that examiners were going to request and although there were no specific documentation requirements as part of this 2007 focus, there were expectations that examiners would ask management about these areas. See NAIC letter dated Jan. 18, 2007, at: www.naic.org/documents/committees_e_examover_fehtg_letter_risk_focused_exams.pdf.

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These critical reviews of the financial sector and insurance industry eventually gave birth to the NAIC's 2008 Solvency Modernization Initiative (SMI). The NAIC singled out the SMI as a focus for its 2010 agenda; on the agenda were considerations for changing RBC calculations, insurance company supervision and statutory accounting details (NAIC, 2010). Early documentation expressed concern over keeping up with global and economic changes, but the end goal was clearly stated as a focus on consumers: "We remain committed to maintaining a system that assures consumers that companies in our states have the financial means to meet policyholder obligations" (NAIC, 2010).

As part of its initiative, the NAIC looked to other modernization efforts such as Basel II, International Association of Insurance Supervisors (IAIS) efforts, Solvency II and other specific efforts found in jurisdictions such as the European Union (EU), Australia, Switzerland and Canada (NAIC, 2009). Early in the effort, the NAIC created a roadmap to guide the SMI, as shown in Figure 1. The road map included discussions on capital requirements, insurance group supervision, reinsurance, statutory accounting and financial reporting, and governance and risk management. The NAIC also emphasized that the SMI was not going to be just about solvency, but also would include a review of governance, risk management and more. The NAIC specifically mentioned enterprise risk management (ERM) as one of its "SMI ideas that merit consideration" (NAIC, 2009). As early as 2010, the NAIC considered requirements for ERM and Own Risk and Solvency Assessment (ORSA) for insurers that would be reported to the insurance regulator (NAIC, 2010). These considerations became more formalized in the NAIC's Risk Management and Own Risk and Solvency Assessment Model Act (#505) (NAIC, 2012).

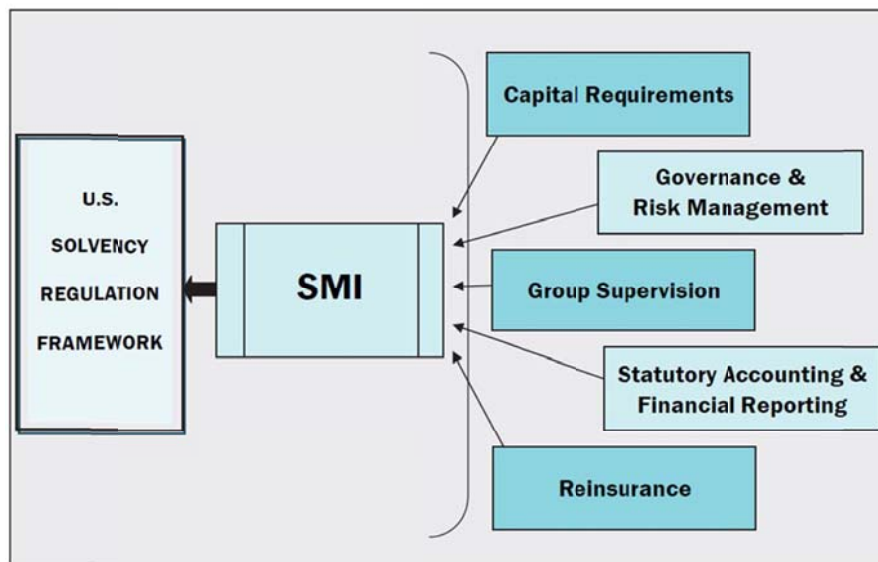
ORSA is described as an internal assessment (tailored to insurers based on size and complexity) performed by insurers that includes identification and evaluation of material and relevant risks for the insurers or insurance groups (NAIC, 2015b). Insurers should describe how their risks are managed and detail the sufficiency of capital for those risks. Additionally, the assessment should be done annually or whenever there are significant changes to insurers' risk profiles (NAIC, 2014b). The goals of ORSA are to: 1) foster effective ERM (for all eligible insurers); and 2) provide a group perspective on risk and capital (for those insurers in an insurance group) (NAIC, 2014b). Model #505's stated purpose is to: 1) identify the requirements for a risk management framework; 2) provide guidance on completing an ORSA; and 3) provide guidance on completing the ORSA report (NAIC, 2012).

Model #505 has an effective date of Jan. 1, 2015, with filings beginning in 2015. It is up to each state to determine whether to pass Model #505 and to determine any necessary changes.² Insurers are exempt from Model #505 (as

2. As of June, 2015, 35 states adopted the *Risk Management and Own Risk and Solvency Assessment Model Act* (# 505), and the following three states are considering adoption (NAIC, 2015): Alabama, Massachusetts and Michigan. To date, the following states have not adopted

written) if their direct premiums are less than \$500 million and the insurance group's direct premiums are less than \$1 billion (NAIC, 2014b).³

Figure 1:
Solvency Modernization Initiative Roadmap



However, many smaller insurers may be likely to consider performing an ORSA. Advisory firm Baker Tilly notes that smaller insurers may consider ORSA because ERM is recognized as an industry best practice and will be considered by ratings agencies (Baker Tilly, 2014). An executive for insurance broker Willis notes that state regulators may require ORSA reports from troubled insurers of any size, which is supported by the *NAIC Own Risk and Solvency Assessment (ORSA) Guidance Manual* (Guidance Manual) (Ingram, 2013; NAIC, 2014b). Insurers with high growth potential may also consider performing an ORSA if their annual premiums approach the \$500 million threshold in order to prepare for this regulatory requirement. Walker, Pooser and Walker (2015) show that one-third of U.S.-based publicly traded insurers view ORSA as a material risk factor in their annual reports, which indicates that the insurance industry is concerned with the implementation of ORSA reporting requirements. As more states adopt Model #505, the industry's concern with ORSA should only grow.

Model #505: Arizona; Colorado; Florida; Idaho; Maryland; Mississippi; New Mexico; North Carolina; South Carolina; South Dakota; Washington, DC; and West Virginia.

3. According to Model #505 (page 3), this includes “direct written and unaffiliated assumed premiums, including international direct and assumed premiums” but excludes “premiums reinsured with the Federal Crop Insurance Corporation and Federal Flood Program.”

In this paper, we provide an overview of Model #505 and discuss the implications of each section within it. We then discuss the requirements ORSA places on insurers' risk management framework and attempt to reconcile the requirements of Model #505 with the Insurance Services Office (ISO) and the Committee of Sponsoring Organizations (COSO) ERM frameworks. Finally, we discuss the implications of Model #505 for insurers, regulators and researchers.

The ORSA Guidance Manual – Overview

In order to facilitate ORSA implementation, the NAIC created the Guidance Manual to explain the purpose and requirements of ORSA, as well as exemptions from filing.⁴ The Guidance Manual specifically requires that non-exempt insurers maintain a risk management framework and conduct an ORSA. The Guidance Manual acknowledges that ORSA will be unique to each insurer and should reflect the insurers' "business, strategic planning and approach to ERM" (NAIC, 2014b). Eligible insurers are required to file an ORSA Summary Report to their state insurance commissioners, and the Guidance Manual provides direction on the preparation of this report. According to the Guidance Manual, the insurance commissioners should expect that an ORSA Summary Report is a product of ERM and that it includes all "material and relevant" risks. The information within an ORSA Summary Report is also required to be consistent with the ERM information that companies would supply to senior managers and directors; i.e., insurers are not expected to withhold any information or change the information reported to the regulator (NAIC, 2014b).

The guidelines also require that the ORSA Summary Report should be supported by internal risk materials, which the regulator may request to review. As such, insurers should document their current ERM frameworks and processes. While the Guidance Manual states that the content of the ORSA and the supporting risk materials are confidential, many state regulators and others in the insurance industry have expressed concerns over the effectiveness of the confidentiality (NAIC, 2011; AM Best, 2015). While the ORSA Summary Report requires an internal-level disclosure of risk information, not all other regulatory and rating agency disclosures will contain the same level of detail (NAIC, 2014b). Insurers should consider how they will gather and communicate risk information to external monitors, as well as the sufficiency of their communication. One consideration for insurers is that preparation of an ORSA Summary Report may provide a platform for the consistent reporting of risk data to other entities such as the U.S. Securities and Exchange Commission (SEC) and ratings agencies.

4. The Guidance Manual can be accessed at www.naic.org/store/free/ORSA_manual.pdf.

The ORSA Summary Report

The ORSA Summary Report should be the result of insurers' own risk assessment. The ORSA Summary Report will be provided to the insurance regulator as the guide to understanding insurers' material risks and the techniques employed to manage those risks. The ORSA Summary Report should contain three sections: 1) an ERM framework description; 2) an insurer assessment of risk exposures; and 3) a group assessment of risk capital and prospective solvency assessment (NAIC, 2014b).

Section 1 – ERM Framework Description

Section 1 of the ORSA Summary Report should contain a description of insurers' ERM framework and the related risk principles/risk management policy statement. Model #505 sets forth minimum required reporting principles, which include: 1) risk culture and governance; 2) risk identification and prioritization; 3) risk appetite; 4) tolerances and limits; 5) risk management and control; and 6) risk reporting and communication. One implication of this section is that insurers will, perhaps for the first time, need to adopt a set of ERM principles to follow and communicate in their report.⁵ These new reporting requirements may be cumbersome for some insurers without an established ERM program and without organizational support to implement ERM. Several consulting firms—including Deloitte, KPMG, Ernst & Young, PricewaterhouseCoopers and Protiviti—are offering ORSA services to the insurance industry in order to assist insurers with filing an ORSA. Some insurers may look for ERM guidance from established frameworks such as those published by the COSO and ISO.^{6,7}

Within Section 1 of the Guidance Manual, the first principle reported is risk culture and governance. Insurers must report the roles and responsibilities related to ERM, as well as their governance structure. Insurers must also report on their "risk culture." No consistent definition of risk culture exists in academic or professional literature, although some authors attempt to provide a description of risk culture. For example, Roeschmann (2014) describes risk culture as "the product of organizational and group learning about what has or has not worked in the past," which is a sort of experiential learning (at the corporate level). This idea

5. A survey conducted by St. John's University and Protiviti (2015) shows that about 40% of responding insurers will begin conducting risk assessment as a result of ORSA and that 60% of responding insurers indicate a need for further training in enterprise risk management for management and the board of directors.

6. The NAIC states that "... insurers or insurance groups may utilize various frameworks in developing, implementing, and reporting on their ORSA processes (e.g., COSO Integrated Framework, ISO 31000 ...)" in its 2014 *Financial Analysis Handbook* (NAIC, 2014a).

7. More aggressive insurers may develop an ERM vision statement, ERM charter, and a roles and responsibility for ERM plan. Harley-Davidson recently won an award for its ERM efforts and included all of these ERM elements (Walker, 2014).

is supported by the Institute of Risk Management (2012), which states, “The culture of a group arises from the repeated behavior of its members.” If these descriptions are accurate, firms may use the risk culture reporting requirement as an opportunity to describe how risk management has developed within the company based on successes and failures of the past.

A recent survey of insurers preparing to engage in ORSA suggests that risk culture, while critical, is not well-developed in many companies (St. John’s University and Protiviti, 2015). Ring, et al. (2014) note that regulators in banking and insurance industries, especially after the financial crisis, are requiring regulated companies to “take note of” and assess their own risk culture. Insurers should be prepared for regulators to ask how the company understands its risk culture and whether they have assessed that culture; the ORSA Guidance Manual sets forth that a minimum ERM framework establishes “a risk culture that supports accountability in risk-based decision-making” (NAIC, 2014b). This requirement may have implications for board members and managers, leading to questions about how risk culture is understood and how risk is measured within the firm.

The second principle from Section 1 of the Guidance Manual is risk identification and prioritization. This principle requires that insurers justify their risk identification process, assign responsibility of this task to someone within the company and that risk identification is performed within all parts of the business. The Guidance Manual states, “Any strengths or weaknesses noted by the commissioner in evaluating this section of the ORSA Summary Report will have relevance to the commissioner’s ongoing supervision of the insurer ...” (NAIC, 2014b). This principle may be interpreted as a requirement to engage in a holistic ERM process (one that considers *all* risks across the firm) when coupled with the requirement to identify and categorize “relevant and material risks,” as well as the requirement from Section 2 of the Guidance Manual that insurers must assess both quantitative and qualitative risks identified in Section 1 (NAIC, 2014b). Additionally, because the ORSA Summary Report will have relevance on the insurance commissioner’s supervision of the insurers, an insufficient ERM process may lead to increased regulatory scrutiny for the firm.

The Guidance Manual requires that insurers describe how all of their major risks are identified—including qualitative and quantitative risks. For insurers and chief risk officers that traditionally focused on financial risks, this could be especially difficult (Ernst & Young, 2013). The Guidance Manual also explicitly states that insurers must identify and assess *material* risks.⁸ Additionally, insurers must be ready to explain why they believe they have identified all material and relevant risks. While the risk identification principle is cumbersome, it may have a long-term beneficial impact on insurers. There is evidence that the greatest destroyers of enterprise value are not financial risks but reputational risks and other types of low-frequency, high severity risks (Deloitte, 2014).

8. Material risks are not defined by the NAIC in any of the ORSA documents we have reviewed, although examples of material risks are provided in the Guidance Manual. These examples include credit, market, liquidity, underwriting and operational risks.

A potential area of concern for insurers relates to “missed risks”—losses that manifest and were never identified—as well as emerging risks. A weak risk identification process may lead to increased regulatory scrutiny of insurers (NAIC, 2014b). Insurers must ask if a failure to identify a risk that causes a loss or the failure to identify an important emerging risk will necessarily lead to increased scrutiny.

The third principle from Section 1 of the Guidance Manual requires a report of insurers’ risk appetite, tolerance and limits. The Guidance Manual recommends that insurers create a “formal risk appetite statement” with risk tolerances so that the board of directors can set strategy in accordance with documented risk principles. A COSO report defines risk appetite as “the amount of risk, on a broad level, an organization is willing to accept in pursuit of value,” (Rittenberg and Martens, 2012), which is consistent with definitions offered by other authors (e.g., Gai and Vause, 2005; Adalsteinsson, 2014). This principle should encourage insurers to explicitly document their willingness and tolerance to engage in risk across multiple risk categories.⁹ As stated in the Guidance Manual, each insurer’s ORSA Summary Report will be uniquely crafted by each insurance company, and this element of the report is one that may vary greatly across firms.

The fourth principle from Section 1 of the Guidance Manual is a description of insurers’ risk management and controls. While the Guidance Manual provides little detail on what is expected or what should be reported, the ISO 31000 ERM framework describes risk controls as activities that modify a risk (ISO, 2009), and a study by Ellul and Yerramilli (2013) shows that greater implementation of risk controls lead to reduced firm volatility in certain financial firms. This section of the ORSA Summary Report requires insurers to document measures used to reduce the frequency and severity of risks (i.e., risk controls) and the effect that this has on material risks. In addition, the Guidance Manual states that this principle should be an ongoing process, so insurers may need to show that risk controls are continuously being evaluated, implemented and monitored on the risks identified within the ORSA Summary Report.

The final principle in Section 1 of the Guidance Manual is risk reporting and communication. This principle requires that insurers are transparent in communication between the firm and its “key constituents” regarding risks and risk management. A recent study showed that a lack of transparency and communication can work against an ERM process and cause damage to a firm’s risk culture (Walker et al., 2014). News stories of poor risk communication or risk management at firms such as Lehman Brothers, General Motors and Washington Mutual, which experienced insolvency and other problems, also give weight to the importance of this principle. The Guidance Manual provides no definition of constituents, so there may be some differences in interpretation among insurers

9. It is likely that many insurers will tolerate risks differently across categories. (For example, some insurers may tolerate greater levels of underwriting risk depending on business mix and solvency.)

adopting ORSA. However, it is likely that key constituents will include management, the board of directors and the insurance regulators.¹⁰

Section 1 of the Guidance Manual also requires insurers to report how the firm monitors risk and how it detects and adjusts for changes in its risk profile. The Guidance Manual states that the information contained in the Summary Report should be consistent with ERM information reported to managers and the board.

Section 2 – Risk Assessment

Section 2 of the ORSA Summary Report contains insurers' assessment of risk. Insurers are required to assess both qualitative and quantitative risks in normal and stressed scenarios. (The Guidance Manual provides some guidance on the interpretation of "stressed.") Additionally, the impact of risks on the sufficiency of capital to meet capital requirements should be addressed within this section.

While the Guidance Manual identifies several categories of risk that insurers may consider, the Guidance Manual notes that certain categories—operational and reputational risk are identified as examples—are difficult to measure using conventional risk assessment techniques and may require qualitative risk analysis. The Guidance Manual requires analysis of more than just financial and underwriting risks (NAIC, 2014b). Further, the NAIC *Financial Analysis Handbook* for 2014 notes that many of the risk categories for Section 2 may not apply to all insurers or may be categorized differently by the insurance company (NAIC, 2014a). The Guidance Manual encourages insurers to use models or simulations when assessing the impact of risks to add rigor to their existing risk management framework.¹¹

Reporting requirements for risk assessment include descriptions and explanations of material risks, impact and likelihood estimates of material risks (while not explicitly required, the Guidance Manual does encourage probabilistic estimation of risks in Section 2), assumptions used to analyze risk, mitigation that might modify a risk, and outcomes of plausible loss scenarios. Insurers must report the potential impact of a risk on its balance sheet, income statement and future cash flows with Section 2.

Insurers also need to perform an analysis of expected losses, loss impacts or other outcomes. The inputs for these analyses should be justified in the ORSA Summary Report. For certain models or analyses (e.g., stress tests), the insurance regulator may provide inputs for insurers' use or define the stress conditions to be used in these models.

10. A report by the International Association of Actuaries (2015) highlights the importance of ORSA reporting to the board of directors and management of the firm.

11. Except in some cases, which we note below, managers within the firm are responsible for creating reasonable inputs for these models.

Risk assessment should be performed at the level on which insurers are managed (i.e., at the group level if actively part of a group or at the company level if the legal entity operates independently). Section 2 also requires insurers to estimate risk interrelatedness. However, the wording of this requirement within the Guidance Manual is vague.¹² The requirement appears to encourage management to consider relationships between risks categories that might, when combined, lead to insurance company failure.¹³

Although this scenario may be unlikely, one interesting result from Section 2 is that insurers could potentially argue a need to hold less risk capital under ORSA than might be required by RBC requirements. “Insurers and/or insurance groups will be required to articulate their own judgment about risk management and the adequacy of their capital position” (NAIC, 2015a). Insurers should document their assessments in a clear, understandable and defensible manner.

Section 3 – Group Assessment

Section 3 of the ORSA Summary Report is the group assessment of risk capital and prospective solvency assessment. Insurers must detail how they combine qualitative and quantitative risk assessments to determine how much capital to hold for current and future business periods. This should be performed at the group level for insurers unless they are not part of a group.

The first subsection of Section 3, the Group Assessment of Risk Capital, requires insurers to report capital adequacy based on overall firm/group level risk. Insurers already have to satisfy RBC requirements based on underwriting risk, investment risk and other financial risks; Model #505 modifies the current law by requiring insurers to set aside risk capital for qualitative risks that are identified and assessed in Section 1 Section 2. The Guidance Manual also requires insurers to report how group capital and overall risk may be interrelated; external or internal changes may affect both values simultaneously. Finally, insurers need to report how their risk capital changes over time and why the value changes.

This subsection also details several methods that may be useful in assessing risk capital.¹⁴ Of important note, the assessment of group capital requires the elimination of double-counting assets (double gearing) for insurers in the same

12. For example, the Guidance Manual states, “History may provide some empirical evidence of relationships [between risk categories], but the future is not always best estimated by historical data, (NAIC, 2014b).”

13. The concern surrounding this occurrence is understandable given evidence from a recent study that showed that some of the largest declines in market value stem from multiple risks events manifesting around the same time (Deloitte, 2014).

14. The Guidance Manual provides several examples of “considerations”—operational characteristics and other parameters specific to the insurance company—for assessing the adequacy of risk capital. Some examples of these considerations are definition of solvency, accounting regime, time horizon, risks modeled and more.

group.¹⁵ Insurers should also discuss liquidity of their capital and how quickly entities within the group can deploy capital from one to another. Additionally, insurers are to be alert to any material changes within their risk profile that might change capital adequacy measurement. Insurers may be asked by the insurance commissioner how they identify and attempt to manage such changes (e.g., macroeconomic or microeconomic changes) (NAIC, 2014b). If insurers already have an emerging risk identification process, these changes may be linked to the process. Alternatively, insurers may have tracking metrics and board reporting on new or changing risks on a regular basis. Recall, the ORSA is to be consistent with board reporting. Insurers should be ready for their board of directors to ask similar questions about changes in material risks.¹⁶

The second subsection, the Prospective Solvency Assessment, requires insurers to estimate how they will prepare for future risk events based on their strategies and goals. This section relates to insurers' long-term business plan and notes that insurers should prepare for potential losses and risks associated with executing this plan with risk capital. When reviewing this subsection of the Guidance Manual, we note similarities with the prior subsection. Where the prior subsection details insurers' current preparation for risk conditions, this subsection allows insurers to tell insurance regulators how they will prepare for future risk conditions and potential changes to their risk profile. This may include an assessment of how today's capital will progress and change and also includes future capital plans.

The ORSA Framework

A unique feature of the Model #505 is that it explicitly states that insurers must assess the adequacy of their risk management framework (not just their risks). Given that ERM has been shown to add value (Hoyt and Liebenberg, 2011; McShane, Nair, and Rustambekov, 2011; Baxter, et al., 2013) and given some of the high-profile risk failures that insurers seek to avoid, knowing that the ERM process works carries potential value for an insurance company.¹⁷ Additionally, boards of directors may feel more confident knowing that their firms have a risk

15. This prevents the insurance group from using the same capital to hedge two or more risks simultaneously through intra-group transactions.

16. The Canadian Office of the Superintendent of Financial Institutions (OSFI) details the board of director's responsibilities related to risk assessment and management within the insurance industry. The OSFI places a large onus of responsibility on the board for ensuring that relevant risks to the firm have been identified and managed (OSFI, 2014). Similar responsibilities are being placed upon boards within U.S. jurisdictions (PWC, 2014).

17. Harrington (2009) makes note of the importance of the importance of AIG's losses on the insurance sector during the financial crisis but also notes that the majority of the insurance industry was mostly uninvolved during the financial crisis. Still, regulation has focused on the insurance industry as a part of the financial sector since the financial crisis and, therefore, ERM is a growing concern within the industry.

management framework that has been reviewed, documented and assessed (Lam, 2001; Gates, 2006).

The Guidance Manual specifically states that insurers are expected to “regularly, no less than annually, conduct an ORSA to assess the adequacy of its risk management framework, and current and estimated projected future solvency position” (NAIC, 2014b). Neither the COSO ERM framework (COSO, 2004) nor the ISO 31000 framework (ISO, 2009)—two established ERM frameworks—require the framework to be assessed. However, ISO 31000 does highlight continual improvement, monitoring and review of the framework, as well as improvement in the maturity of the framework.

Some insurers preparing for ORSA may already have an ERM framework in place. Model #505 requires all non-exempt insurers to have or adopt a risk management framework. The requirement to continually assess their risk management framework suggests that insurers might need to compare or benchmark their practices with other risk management standards. Two of the most widely adopted ERM frameworks are the COSO ERM Integrated Framework and the ISO 31000 Framework (RIMS, 2011). Table 1 on the following page compares the minimum reported principles required in Section 1 of the Guidance Manual with the risk management frameworks set forth by both COSO ERM Framework and ISO 31000.¹⁸ Table 1 shows that there is some overlap between ORSA and other common frameworks.¹⁹ There are also key differences. For example, COSO’s ERM framework emphasizes the measurement of residual risk after other risk treatment techniques are implemented (COSO, 2004). ORSA provides little insight into the risk management process of the insurer and the measurement of residual risk.

ORSA also has some specific requirements not seen in other risk management frameworks. The ORSA Summary Report requires: 1) the equivalent of a chief risk officer signature; 2) the accounting basis used—generally accepted accounting principles (GAAP) statutory accounting principles (SAP), etc.; and 3) the time period to which the reported information applies (NAIC, 2014b). The ORSA Summary Report must also identify significant changes in material risks in each new reporting period. Insurers should be aware that some banking jurisdictions have passed internal capital adequacy assessments processes (ICAAP) and that those assessments have strict requirements over risk oversight and auditing. For example, the ICAAP supervisory statement for the Bank of England requires a

18. The ORSA framework is described in the ORSA Guidance Manual (NAIC, 2014b). The COSO and ISO 31000 ERM frameworks are described in documents that can be purchased from each organization. A robust comparison of the COSO and ISO frameworks (with several other ERM frameworks) is available in a 2011 RIMS report (RIMS, 2011).

19. For example, ORSA requires insurers to identify risks associated with their current business plan. Similarly, COSO emphasizes identification of risks that keep the company from meeting objectives. ISO also emphasizes achievement of objectives and adds that their framework can help a company improve its performance. Additionally, COSO, ISO and ORSA encourage probabilistic risk evaluation (considering the likelihood and impact of a loss) within their frameworks.

sound risk process, linkage to strategic planning, board approval of risk tolerance and board of directors requirements to ensure management establishes a framework. It also requires an independent review (and potential use of internal or external auditors) of the related control structure. Insurers complying with ORSA might consider similar approaches (Bank of England, 2013).

**Table 1:
Comparison of ORSA Framework to COSO and ISO**

ORSA Minimum Principles	COSO ERM Components	ISO 31000 Process
Risk Culture and Governance	Internal Environment Objective Setting	Establishing the Context
Risk Identification and Prioritization	Event Identification Risk Assessment	Risk Assessment Risk Identification Risk Analysis Risk Evaluation
Risk Appetite, Tolerance and Limits	Internal Environment	Establishing the Context
Risk Management and Controls	Risk Response Control Activities	Risk Treatment
Risk Reporting and Communication	Information and Communication Monitoring	Communication and Consultation Monitoring and Review

Impact of Model #505

Model #505 will create new challenges and opportunities for insurance companies, regulators and others stemming from the requirements to engage in ERM, report qualitative as well as quantitative risks, and hold a group-level view of capital adequacy. An important question for these parties will be: How does ORSA truly affect solvency? Insurance companies must currently satisfy solvency requirements related to their underwriting and financial risks. Does ORSA have the potential to upset current models and reporting requirements by adding a new element to solvency regulation?²⁰ A potential concern is that ORSA reporting requirements will be duplicative with other regulatory requirements (American Academy of Actuaries [Academy], 2012). However, some authors argue that ORSA will help align ERM compliance with other reporting requirements and that ORSA may increase efficiency within the firm by encouraging improvement of an ERM process in the preparation of an ORSA (Spinard, Runchey, and

20. Russo, Resnick and Kwan (2014) note that the RBC formula does not account for all of the risk categories that will be reported in the ORSA (e.g., operational risk is not part of the RBC formula). Many existing solvency monitors are tailored to the entire insurance industry, while ORSA will be specifically crafted for each insurer.

Collingwood, 2013). Overall, ERM is theorized to add value to a firm (Nocco and Stulz, 2006; Hoyt and Liebenberg, 2011). As ORSA requires insurers to maintain an ERM framework, a major question posed to the insurance industry will be: What are the value implications of this act?

Impact of ORSA on Insurance Regulators

The Guidance Manual states that the ORSA Summary Report “may” influence the “scope, depth and timing” of insurance commissioner examination procedures (NAIC, 2014b). Although the Guidance Manual suggests the ORSA Summary Report is relative to the complexity of the insurers’ risk profile (meaning a more complex profile should have a more complex report), it is plausible to assume that a poorly executed ORSA Summary Report may place an insurer under increased regulatory scrutiny. The Guidance Manual also mentions that strengths and weaknesses reported within the ORSA may affect the insurer’s ongoing supervision.

Insurance regulators will face new challenges stemming from ORSA because the collection, analysis and actions on new ORSA Summary Reports will be time- and resource-consuming. In an Academy report containing questions and answers related to the passage of ORSA, there are several notes that emphasize the need for state insurance regulators to devote more resources to the analysis of ORSA filings, including the potential hiring of new risk experts and the creation of departments to analyze ORSA reports (Academy, 2010). Within this 2010 report, in response to a question on the need for additional resources to cope with ORSA, an executive from the Property Casualty Insurers Association of America (PCI) said, “We believe the costs for states will be significant”. Given the purpose of ORSA, insurance regulators that fail to devote adequate resources to understanding ORSA reports are unlikely to gain a higher-level understanding of insurers’ risk management decisions.

ORSA will also change the way that insurance regulators view capital adequacy among insurers. Part of the purpose of ORSA is to require insurers and insurance regulators to view qualitative risks (in addition to quantitative risks) as potential causes of financial distress (Shapella and Stein, 2012). Shapella and Stein (2012) argue that an ORSA should be more qualitative in nature than quantitative; the benefit from the ORSA process will only be realized if insurers effectively communicate these types of risks to insurance regulators.

Impact of ORSA on Insurance Companies

The numerous new requirements and potential changes from the Model #505 have created concerns for insurers. Walker, et al. (2015) report the top 20 risks identified by publicly traded insurers in SEC regulatory filings. The No. 1 risk reported (96% of firms identify this as a material risk) pertains to regulation within the insurance industry. A recent survey by St. John’s University and Protiviti

Consulting of the U.S. insurance industry showed that insurers were concerned about many of ORSA's requirements, including the preparation of an ORSA (St. John's University and Protiviti, 2015). However, only 60% of respondents had conducted a gap analysis to determine what type of improvements would be required to maintain an ERM framework with new ORSA requirements. Roughly half of the respondents believed ORSA would alter the types of products sold and customers obtained. Additionally, according to the survey, nearly 60% of respondents believe managers and board of directors members will require additional training on ERM in order to comply with ORSA and that Model #505 will change corporate governance structure within their firms. Further, 40% of respondents stated that ORSA will cause them to *start* performing risk assessment, which indicates this practice is lacking from many large U.S. insurance companies.²¹

In 2014, the SEC announced ERM was a national examination priority (SEC, 2014) which increases the pressure to engage in and report on firm risks for publicly traded insurers. With ERM requirements emerging from various governing bodies, a single risk repository or informative report by the insurer might lead to increased efficiency within the risk management and compliance areas of the firm and may also help reduce risk-related information asymmetries between insurers' management, boards of directors and external monitors.

ORSA Research Opportunities

The stated goal of ORSA is listed as fostering effective ERM and providing a group level view of risk management and risk capital. There are many reasons companies are already doing ERM, including SEC board risk oversight requirements, rating agency pressure and pressure from shareholders for better risk management. Empirical research on ERM, which is still developing, has shown that ERM can lead to enhanced firm value (Hoyt and Liebenberg, 2011; Farrell and Gallagher, 2014; Grace, et al., 2015) and better decision-making processes (Gates, Nicolas, and Walker, 2012). With the passage of ORSA laws in many states within the U.S., researchers will likely begin to look at the potential value of ORSA within the insurance industry. Will it lead to increased value, or will it be viewed as burdensome regulation that lowers the ability of a company to compete in the market? Eastman and Xu (2015) approach this topic and find some evidence that insurers with ERM programs experienced higher stock returns than non-ERM insurers after the passage of Model #505. As more data becomes available on the

21. Other findings from the survey are that 60% of respondents believe ORSA will help improve management of emerging, strategic and financial risks, as well as risk culture. However, fewer than 50% of respondents believe ORSA will significantly affect operating, underwriting, market, liquidity and credit risks. This may indicate that insurers view ORSA as a means to improve qualitative risks but not quantitative risks—many of which have established models and methods of assessment.

company-specific attributes related to ORSA, more researchers will likely focus on the topic of firm value and ORSA.

There are other factors that researchers might consider, including: 1) how ORSA will change insolvency rates and capital adequacy; 2) rating agency responses to ORSA; and 3) the cost of capital for insurers under an ORSA regime. However, the full extent of research possibilities will require more information on the type of data available from ORSA filings.

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