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# Meeting the Solvency II operational risk challenge

*Integrating pragmatic operational risk management techniques in core businesses operations and decision making processes*

## Executive overview

With individual countries required to implement Solvency II by 2014, insurance companies face relatively tight deadlines to comply with a more sophisticated risk-based approach to supervision throughout the EU.

Insurance companies have focused on analyzing accumulated data to assess traditional risks such as life expectancy and the likelihood of accidents; few have experience or data on which to measure their operational risks.

Companies must now implement new governance and processes to ensure they move beyond traditional insurance underwriting risk to a comprehensive risk management framework that assesses all internal and external risks and which ensures that companies are sufficiently capitalized to cover their exposures. Failure to adapt to these changing requirements could result in stiff capital reserve requirements being determined and imposed by regulators.



Automating the process of identifying, measuring, monitoring, analyzing and managing operational risk is essential for insurance companies that need a holistic view of risk within the organization and need to embed operational risk management and governance into the corporate culture.

### **Operational risk challenges in insurance**

Insurance risk management has typically focused on insurance liability, based on known risks and associated historical data. But while this historical data is critical to the aggressive pricing of certain products such as life insurance, this approach is not appropriate for quantifying internal operational risks, such as malpractice or internal system failure.

Management traditionally believed operational exposures to be significantly lower than underwriting risks and credit risks. Operational risks include business practice violation, financial disclosure violation, asset pricing/modeling risks, transaction integrity risks and so forth, all of which have factored heavily into the systemic exposures that have roiled the world's financial systems.

Few insurers have sufficient historical data to adequately model operational risk in the same way that they do for financial risks. In fact, these risks are often not isolated at all in existing risk management practices even though they may represent 20 percent of an institution's risk exposure.

Dr. Jürgen H.M. van Grinsven, director of Deloitte Enterprise Risk Services, and Dr. Remco Bloemkolk, who works at ING corporate risk management, wrote in an article on operational risk and Solvency III that, "Over the past few decades many insurers have capitalised on the market and have developed new business services for their clients. On the other hand, the operational risk that these insurers face have become more complex, more potentially devastating and more difficult to anticipate. Although operational risk is possibly the largest threat to the solvency of insurers, it is a relatively new risk category for them."<sup>1</sup>

Operational risk has moved to the forefront of good corporate governance in the wake of financial calamities such as the January 2008 scandal at Société Générale, in which poor operational controls failed to detect and prevent unauthorized trading activities. Regulators and stakeholders are demanding that companies understand and disclose the risks being taken in specific lines of business and to account for the impact that risks in one area of their business could have on other areas. Insurance companies must implement a new information architecture to manage their operational risk.

As Drs. van Grinsven and Bloemkolk concluded, "Operational risk is possibly the largest threat to insurers. This is because operational risk losses result from complex and nonlinear interactions between risk and business processes. Unbundling operational risk from the other types of risk in the management and measurement of risk can help prevent future failures for insurers."<sup>2</sup>

## Solvency II requirements

Solvency margin requirements for companies headquartered in the EU date back to the 1970s; these requirements were subjected to a review that began in the 1990s and resulted in the European Parliament and European Commission (EC) in 2002 agreeing to a limited reform now known as Solvency I. However, according to the EC, “It became clear during the Solvency I process that a more fundamental and wider ranging review of the overall financial position of an insurance undertaking was required, looking at the overall financial position of an insurance undertaking and taking into account current developments in insurance, risk management, finance techniques, international financial reporting and prudential standards, etc. This project became known as Solvency II.”<sup>3</sup>

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*“Operational Risk is defined as the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.”*

— Basel Committee on Banking Supervision, “International Convergence of Capital Measurement and Capital Standards”<sup>4</sup>

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Solvency II is structured, much like Basel II for financial services organizations, around three “pillars”:

- **Pillar 1** – Quantitative requirements—establishing adequate financial resources, including minimum capital requirements (MCR) and risk-based, solvency capital requirements (SCR). According to the EC, “the SCR is based on a Value-at-Risk measure calibrated to a 99.5 percent confidence level over a 1year time horizon. The SCR covers all risks that an insurer faces (e.g. insurance, market, credit and operational risk) and will take full account of any risk mitigation techniques applied by the insurer.”<sup>5</sup>
- **Pillar 2** – Supervisor activity of regulators—aimed at adequate governance and pushing firms to adopt enterprise risk management systems, this pillar aims to ensure that regulators are satisfied by the internal or external models used by companies to assess how much capital is required to account for all risk groups. This pillar introduces a new, forward-looking tool known as Own Risk and Solvency Assessment (ORSA), which each company must develop to identify and analyze operational risk, market risk, underwriting risk and default risk.
- **Pillar 3** – Disclosure requirements to ensure transparency to regulators, shareholders and analysts.

Solvency II will allow insurance companies to use their own internal models to calculate capital reserves sufficient to meet the costs of the combined risks covered under Solvency II provided those models have been approved by the appropriate supervisory body.

Those companies without an approved internal model will be subject to a “standard model” that treats risks consistently across companies and which may be easier to implement for smaller companies, but which may not reflect desired specifics of larger companies, such as a focus on market niches, changes in business strategy over time and risk mitigation strategies.

### Implementation issues

According to the EC, almost all EU insurers and reinsurers must comply with Solvency II. Companies with less than €5M in annual premiums income are not subject and can choose to “opt in” if desired.

Without doubt, one of the largest changes for all firms covered by Solvency II is the ORSA requirement. “The ORSA has a twofold nature,” according to EC documents. “It is an internal assessment process within the undertaking and is as such embedded in the strategic decisions of the undertaking. It is also a supervisory tool for the regulatory authorities, which must be informed about the results of the undertaking’s ORSA.”<sup>7</sup>

The UK’s Financial Services Authority notes that Solvency II requires “an effective risk management system, owned and implemented by senior management, respecting the fact that delegation of responsibilities cannot mean dilution of responsibility” and that “The ORSA is an internal risk assessment process that aims to ensure senior management have conducted their own review of the risks to which they are exposed and that they hold sufficient capital against those risks.”<sup>8</sup>

InsuranceERM reported in January 2009 that, “Despite having seen numerous examples of what can go wrong, the majority of insurers are reluctant to confront operational risk.”<sup>9</sup> Yet confront it they must. In November 2009, CEIOPS issued its final guidance to the EC on Level 2 implementation of Solvency II, a crucial benchmark on the road to final implementation.

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*“The ORSA can be defined as the entirety of the processes and procedures employed to identify, assess, monitor, manage, and report the short and long term risks a (re)insurance undertaking faces or may face and to determine the own funds necessary to ensure that the undertaking’s overall solvency needs are met at all times.”*

— Issues Paper, “Own Risk and Solvency Assessment,” Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS)<sup>4</sup>

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Another issue confronting insurance companies is the uncertainty over the details of Solvency II's final implementation. That's because the regime is actually a "framework directive" focused on "elaborating the basic enduring principles, or political choices, underpinning the solvency system." It relies on a "Level 2" technical implementation intended to make it "easier for regulation to keep up with the changes in the real world of fast-changing financial markets, as the Commission can decide to update some or all of the implementing measures as times move on."<sup>10</sup> In other words, the operational risk management systems and processes implemented by insurance companies need to be flexible to adapt to changing requirements as the governance mandates evolve.

Such flexibility requires a certainty and confidence in the quality of data available to assess and analyze risk. But, as the Operational Risk Consortium (ORIC) observes, "Quantifying appropriate capital requirements for operational risk remains a challenge for many insurers. This is because internal data on operational losses are often limited and biased."<sup>11</sup> The consortium was founded in 2005 "to deal with the apparent lack of high-quality loss data within the insurance industry"<sup>12</sup> and says that "The absence of quality data is a key obstacle to successful operational risk measurement."<sup>13</sup>

Even after collecting operational risk data over a period of time, another issue that insurers will face is dealing with the confidence levels required by Pillar I. Banks that have implemented the Advanced Measurement Approach in Basel II have struggled with determining the right level of capital to allocate to operational risk loss at the 99.5 percent confidence level. Essentially, it is very hard, to come up with a reasonable capital estimate for operational risk within that level of confidence given the low frequency, high impact nature of operational losses. For instance, should all financial services institutions now carry several billion dollars in reserves as the result of the SocGen (Société Générale) loss?

### **How Solvency II impacts Operational Risk Management**

Businesses have always been engaged in managing risk, but it has taken an unprecedented wave of regulatory oversight to convince many organizations how inadequate their risk management policies and procedures really are.

The UK's Financial Services Authority, in a May 2009 policy document, Insurance Risk Management: The Path to Solvency II, warned that "the risks of not developing detailed plans for Solvency II implementation are great. Firms should have completed or be in the process of completing a detailed gap analysis to identify any shortfalls in expected compliance with the emerging Solvency II requirements, as they bear on their operations."<sup>14</sup>

A gap analysis should evaluate the current state of an insurer's risk management system against current risk standards and the desired state. The organization then must develop a roadmap on how to achieve that desired state. Organizations need to evaluate their entire risk management system and how all of its risk areas –operational, credit, market, insurance, etc–are being managed.

The ORSA essentially requires a comprehensive operational risk management system. According to a definition by Lloyd's Market, "The ORSA can be defined as the entirety of the processes and procedures employed to identify, assess, monitor, manage and report the short and long term risks a firm faces or may face and to determine the own funds necessary to ensure that overall solvency needs are met at all times."<sup>15</sup>

According to the CRO Forum, "At the heart of operational risk management is a clear understanding of the operational risk events that may occur and the strength of the company's processes and mitigation activities to prevent or respond to such events."<sup>16</sup> An operational risk management system should encompass:

- Operational risk policy
- Operational risk appetite and tolerance
- Operational risk identification and assessment
- Operational risk monitoring and mitigation

Given that executive management is charged with ownership of operational risk management and the need to embed it within the organization, many companies are turning to integrated risk management solutions to better understand and proactively manage the risks that can impact the business.

### **What to look for in an Operational Risk Management solution**

Munich-based Allianz spent much of 2008 and 2009 focused on infrastructure and Pillar I of Solvency II. The company selected IBM® OpenPages® Operational Risk Management (ORM) for loss data capture, risk self-assessment and quantitative scenario analysis. The operational risk framework involves the introduction of an updated methodology, improved business processes and new IT support systems. The goal is to integrate pragmatic operational risk management techniques in core businesses operations and decision making processes.

Allianz hopes that their efforts for Solvency II will form the basis of a deeper change in terms of building a risk management culture and the ability to generate good business from a risk and return perspective.

ORM software can provide crucial risk self-assessment capabilities that enable organizations to document and evaluate their risk frameworks, including processes, risks, events, key risk indicators (KRI) and controls. Executive can stay on top of organizational risk activities through dashboards and reports that highlight key risk metrics and policy compliance. Companies can implement business process automation capabilities that provide for realtime event escalation, automated risk processes, and streamlined remediation of issues and action items.

### **Operational Risk Management with OpenPages ORM**

OpenPages ORM software automates the process of identifying, measuring and monitoring operational risk, integrating all risk data in a risk analysis–risk and control self assessments, loss events and KRI–into a single solution. Combining powerful document and process management with a monitoring and decision support system, OpenPages ORM enables organizations to analyze, manage and mitigate risk in a simple and efficient manner.

As part of the IBM® OpenPages® GRC Platform, OpenPages ORM is a key building block and Operational Risk Management tool in implementing an enterprise-wide, integrated approach to risk and compliance.

### **About IBM Business Analytics**

IBM Business Analytics software delivers actionable insights decision-makers need to achieve better business performance. IBM offers a comprehensive, unified portfolio of business intelligence, predictive and advanced analytics, financial performance and strategy management, governance, risk and compliance and analytic applications.

With IBM software, companies can spot trends, patterns and anomalies, compare “what if” scenarios, predict potential threats and opportunities, identify and manage key business risks and plan, budget and forecast resources. With these deep analytic capabilities our customers around the world can better understand, anticipate and shape business outcomes.

#### **For more information**

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