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Executive summaries

Intelligent ERM: Evolving risk management
by David Baxter, Head of ERM Enabling Programme, Swiss Re, and Phil Vermeulen, Partner, EY LLP
Enterprise Risk Management (ERM) is a familiar concept in management theory. However, sometimes its implementation can fall short of delivery on the potential benefits to the business. The need for effective ERM is becoming increasingly evident for companies that want to ensure that their practices are agile enough to respond intuitively to today’s environment. Implementing an enhanced, more intelligent risk management capability is exactly what global reinsurer, Swiss Re, has looked to do in a current and ongoing phase of work conducted in collaboration with EY. This paper presents some of the initial findings from this program of work, some of the areas where enhancements to the existing risk management practice have added most value, as well as some of the more challenging aspects of implementing what is effectively a long-term strategy of cultural change across the business.
Intelligent ERM: Evolving risk management

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Abstract
Enterprise Risk Management (ERM) is a familiar concept in management theory. However, sometimes its implementation can fall short of delivery on the potential benefits to the business. The need for effective ERM is becoming increasingly evident for companies that want to ensure that their practices are agile enough to respond intuitively to today’s environment. Implementing an enhanced, more intelligent risk management capability is exactly what global reinsurer, Swiss Re, has looked to do in a current and ongoing phase of work conducted in collaboration with EY. In this paper, we will present some of the initial findings from this program of work, some of the areas where enhancements to the existing risk management practice have added most value, as well as some of the more challenging aspects of implementing what is effectively a long-term strategy of cultural change across the business.

1 The opinions expressed in this article are the authors’ personal views and do not in any way represent the views of Swiss Re, EY LLP, their partners, or any associated organizations. Any remaining errors are the authors’ responsibility.
Introduction
This article presents a discussion on the lessons learned to date in an ongoing phase of work at Swiss Re, where EY has been working with the risk management function to embed an enhanced risk management strategy. This program of work was initiated in response to a business need to refresh and revisit the risk management plans and processes that had been developed over many years: the aim was not to fix something that was broken, but to identify improvements and enhancements that would increase efficiency and effectiveness, be sustainable in the long term and demonstrate a commitment to a leading risk management culture.

This paper is organized as follows. In the next section, we will present a high-level overview of Swiss Re's vision. In the following section, we will look in more detail at the different areas of enhancement that were identified at the start of this ongoing piece of work — many of these are still evolving in the business. The following highlights some insights and lessons learned from the current experience of embedding change in the risk operating model of Swiss Re, looking at specific operational areas across organization, financial management, process, people, data management and IT systems. Finally, we provide an overview of how businesses that want to implement a similar process can take the initial steps to enhance their own risk management practice.

Swiss Re's vision for “intelligent enterprise risk management” (IERM)
As Figure 1 shows, Swiss Re's vision for a leading edge IERM framework to encourage a more adaptive and intuitive approach to risk is based on three levels:

1. Competitive advantage: shifting the risk culture from a strategy of “blanket” protection or zero tolerance to one that encourages educated and transparent risk-taking combined with enhancements to risk management capabilities would ultimately enable better commercial decisions, without incurring unsustainable cost, thus improving competitive advantage.

To encourage trust, a large part of this initiative has been about driving transparency on governance and roles. To enhance intelligent protection, part of the strategy has been to standardize and industrialize processes where possible, and introducing new systems where appropriate to support risk activity effectively and efficiently.

In the next section, we will look at the different improvement areas that were identified to help embed and encourage this enhanced risk practice and culture. For each of these areas, we will discuss where value has already been added and where challenges have been faced. This program of enhancement is a work in progress and, as such, this paper presents a snapshot of an evolving process.

Focus areas for enhancement of risk management capabilities
Risk management is a core competency for Swiss Re and, therefore, the necessary “building blocks” for IERM were already in place in terms of risk appetite, limits, governance, models and reporting. When looking to choose focus areas at the start of this process, Swiss Re wanted to leverage their existing framework, identifying enhancements only where they would be most valuable.

After conducting interviews across the business and conducting an enterprise-wide assessment of their existing risk processes, the following areas of enhancement were identified, which we have grouped for ease of explanation into “seven E’s of Intelligent Enterprise Risk Management:” This is not to suggest that these enhancements were made in isolation from one another – each of these enhancements work together as part of a wider program of ongoing work:

1. Greater enlightenment: improving forward-looking analysis
2. Greater embeddedness: integrating risk management, capital management and business planning
3. **Greater empowerment:** further enhancing the first line of defense to empower those responsible for taking on risk
4. **Greater effectiveness:** integrating and aligning control activities across functional areas of expertise
5. **Greater entrepreneurialism:** positioning the Risk Management function to provide more value adding advice to the business, both on request and proactively as a valued business partner
6. **Greater efficiency:** improving processes, systems, and communication
7. **Greater engagement:** realigning the risk culture

In the following subsections, we look in more detail at each of these enhancements and how they have worked to date at Swiss Re.

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3 Each of these sections provide an overview of some of the key examples of how these enhancements have worked in practice and, it should be noted, that they do not encompass the entire program of work. Enhancements such as ‘Greater embeddedness’ in particular are too complex to cover in this article and, as such, we only touch upon a few specific examples to highlight the overall concept.

Greater enlightenment: improving forward-looking analysis
In most companies today, risk identification happens in a number of separate areas that rarely interconnect. For example, board members and senior executives have broad discussions with peers from other companies and industries to formulate views about long-term trends and risks, economic research teams analyze long-term macroeconomic development, while at the same time, traders, market risk managers, and actuaries identify medium-term risks from their analyses of market trends or claim patterns, and process managers and operational risk specialists look for potential control breakdowns or fraud. All of the activities that take place in relation to identifying individual risks have worked to date, but they may fail to detect the “next big thing,” which is often signaled by a number of smaller changes in different areas. Swiss Re wanted to deepen its understanding of complexity, and thereby improving its forward-looking analysis, by taking greater advantage of “networked intelligence” from inside and outside the organization.

To address this, Swiss Re looked to enhance the “top risk” identification process that had been in place for many years by
Intelligent ERM: Evolving risk management

Integrating risk management, capital management and business planning

Swiss Re has also looked to enhance its existing emerging risk identification (SONAR) process, which brings together internal and external signals of existing and emerging risks. This process has been enhanced to include a deeper analysis of the interconnectivity between these signals in order to develop more complex threat scenarios and prioritize risks. The signals are analyzed, grouped and prioritized into key emerging risks. Each emerging risk is sponsored by a senior business owner, and is monitored through a formal review process with a range of stakeholders in the business. To ensure that these risks receive sufficient focus, they are also discussed at the most senior levels of the company. Swiss Re is now working on embedding this forward-looking thinking into decision-making. The approach varies between risks but includes actions, such as monitoring the “key risk indicators” and taking appropriate action when they show that emerging threats are crystallizing, ensuring that emerging risks are appropriately charged for, or clarifying risk appetite to ensure that certain risks are not taken onto the balance sheet.

Greater embeddedness: integrating risk management, capital management and business planning

In many insurance companies today, financial planning is largely based on the extrapolation of past patterns and events. Business units develop their targets by looking at their own available resources and at the wider competitive situation. From this starting point, revenue and profit forecasts are made. Sometimes, these forecasts are compared with projections of available and required capital to understand capacity as well as risk appetite and limits, though this happens more often at the end of the process and is simply a health check.

Risk management should form the basis of financial management, with the “Risk Management function” playing a key supporting role throughout. The development of multiple future target states and stress scenarios should form the basis of financial and liquidity planning that is also able to incorporate investor expectations, creating not just a projection but, ultimately, an action plan designed to address any gaps identified and mitigating potential downside risk. Thinking about future targets alongside a consideration of a limited set of possible scenarios (different world states) can aid business understanding of how financial targets can continue to be met in each of these different scenarios.

Swiss Re is currently implementing improvements in its planning process to better integrate financial and risk management perspectives with the aim of enhancing their understanding of the range of potential outcomes and drivers over the planning horizon.

Greater empowerment: further enhancing the first line of defense to empower those responsible for taking on risk

Giving risk takers in the business greater responsibility can create a culture where compliance is not only about following rules, but is also about applying knowledge and experience contextually and interpreting risk accordingly. One of the goals of Swiss Re’s current project has been to ensure that the first line of defense is obligated and fully empowered to manage risk, and that the role of the first and second line is clearly understood. Swiss Re has translated this into practice by implementing clear “delegated authority” thresholds within a defined framework for risk takers in the business before requiring approval from Risk Management, complemented with sample ex-post risk management peer review of any decisions taken. While this has been in place for some time, Swiss Re found that there was often a lack of clarity on ownership of the risks by the first line, and a reliance on the second line for analysis.

To address this, the project is developing a clear “target operating model” that maps all the key risk management activities (identification, assessment, monitoring, execution, and control) to relevant owners in the business and Risk Management, and syndicated this widely. Swiss Re is also investing in the development of directly accessible management information for first-line decision makers to enable them to perform a better risk analysis.

Greater effectiveness: integrating and aligning risk management activities

Even with a highly empowered first line of defense, there is a need for some degree of oversight from the second-line functions. However, in many companies, including Swiss Re, opportunities exist to better align the activities of the second-line functions in order to maximize their effectiveness and efficiency.
As the risk management functions of insurance companies have evolved organically over the years, separate control functions have typically been added as the need for them was identified, often with their own systems, processes and information flows; for example, for market, credit and liquidity management, operational risk management and compliance. These organizational units often interact independently with separate reporting processes, sources of data, and expertise. As such, they tend to be separate not only in terms of operations, but also in terms of skills. As an example, does the “liability” side of the risk function understand the “asset” side of the balance sheet to the appropriate level, and would they be able to identify risks outside of their area of expertise? In many organizations, the answer to this question would be a “no,” because an integrated view in the Risk Management function is not possible except at the most senior level. Furthermore, capturing risk exposure as a whole is hindered by the overlap and gaps between the stages of risk identification, measurement, monitoring and control, and inconsistent sourcing of information, which leads to staff wasting time reconciling information rather than adding value by truly managing risk.

Swiss Re is looking to implement a single risk register for all operational risks, alongside a top-down mapping of where these risks emerge in the process landscape. The aim of this enhancement is to establish a common universe to drive reporting so that all functions have a shared view on materiality and prioritization.

Greater entrepreneurialism: providing value adding advice to the business
Proper risk management is about enabling the right decisions, not controlling the business. The business has to be empowered and encouraged to take risk decisions with opportunity and scope for challenge to come at each level of the business. Just as risk takers should be empowered to be more risk-aware, the risk management framework has the potential to provide a forum for constructive peer review and advice on optimizing commercial decisions as opposed to “tick-box” controls.

This is primarily a cultural shift: to encourage this, Swiss Re wanted to ensure that the Risk Management function was involved in key decision-making processes to provide an independent perspective and suggest new ideas to enhance the risk and return profile. The intention was to tap into the unique experience of risk managers, who can provide forward-looking thinking on trends, which can then be used to directly influence products, investments and other business opportunities. As an example, risk managers consulted in the product development process could help business managers to incorporate safeguards in contract terms, which would potentially allow greater volumes to be written at a lower price for the same capital capacity, thereby increasing competitive advantage.

To successfully implement such a change in the relationship between the first and second lines of defense, Swiss Re’s risk managers would need to establish themselves as credible and skilled contributors to the debate, which in many cases requires enhancement of their current skill sets and approach. This is a clear example of an area where getting the most value out of an enhancement requires a cultural change across the business: in this case, changing both the skills of the Risk Management function and the business managers’ view of their potential role. This is not a simple or quick change to make, but is key to realizing the potential value of the other changes discussed in this paper.

Greater efficiency: improving processes and communication
A key objective of the program at Swiss Re has been to achieve material enhancements to the risk management capabilities of the organization while meeting increased regulatory requirements and without increasing the cost to the company.

The core aim of empowering the first line to take more responsibility for risk is to allow risks to be managed more effectively at the point of origin. However, a secondary benefit is a more efficient and targeted decision-making process that thus frees up the core Risk Management function to focus less on controlling the day-to-day decisions and to look more strategically across the business. This delivers part of the desired productivity gains, but typically more work is needed to achieve these.

Through our review of capabilities, we have noted that a material proportion of risk managers’ time is spent on data cleaning and reconciliation. In addition, the complex network of systems that have grown over time in the Risk Management and Finance functions is leading to some processing inefficiencies. Swiss Re has chosen to address this by investing in a “minimal risk
infrastructure” program to materially simplify the IT landscape and align it to all systems. The aim is a fully integrated, “right-first-time” mentality with minimal applications that serve only the Risk Management function. This will be supported by straight through processing that uses data from the source to minimize data cleaning and reconciliation time. This is being designed to support the first line of defense and ensure they have the right information produced as efficiently as possible.

Greater engagement: realigning the risk culture
The key first step toward enabling cultural change is to set and clearly define the target culture. Fundamentally, Swiss Re wanted to encourage a greater engagement with risk and risk culture across the business by changing the way that the Risk Management function was perceived in the business. Swiss Re wanted risk management to not just be the responsibility of the Risk Management function, but to be something that should involve the entire organization. This message has been supported and clearly communicated through strong sponsorship of the change program from the Board and Executive Committee, which should eventually filter down to every level of the business.

Once this message had been clearly communicated, making the change and realigning the risk culture required putting the right incentives in place so that people could demonstrate a commitment to managing risk. To encourage this new behavior, it should be included in performance assessment and remuneration schemes and, eventually, form part of the recruitment and promotion processes.

Embedding change across the organization
In this section, we will provide a more detailed overview of where some of these changes are being embedded across the organization in four key areas: organization and governance; process; data and IT models; and people and culture. As per the previous section, these groupings have not been made to suggest that these changes are being made in isolation – there are overlaps and interactions that contribute toward the wider program of enhancement taking place across the business.

Clarity in organization and governance
A number of the focus areas mentioned above are about clarifying and changing people’s responsibilities around the organization. When designing a new framework, it is essential to address key questions early on: for example, what is the role of Group versus the Business Units and functional relationships, such as Risk, Finance, Underwriting, and so on? Swiss Re, like many organizations, has previously defined this at a high level in a number of policies, but this needs to be further defined to ensure that there is sufficient clarity and to facilitate change.

This exercise is being done at Swiss Re using two “lenses”:

- The first lens is the well-known “target operating model,” which shows graphically the target roles of different organizational units with respect to the key risk management activities, such as identification, measurement, monitoring and so on. This is being developed through substantial consultation and iteration within the business over a period of one year, driving understanding and ownership of the target state in the process.
- The second lens is the more innovative of the two: Swiss Re is creating a detailed mapping of all the economic balance sheet positions (or risk exposures) of the group and entities to the organizational decisions that cause those exposures to be added, removed or altered. This will then detail the ownership for the different cells in the matrix in terms of risk taking and controlling, and map these to relevant policies and standards. This will allow Swiss Re to test substantially whether certain exposures or decisions are subject to too much or too little oversight. The aim is to highlight areas where there is duplication of oversight between functions on essentially the same risks, and some areas where oversight is insufficient and should be strengthened.

This has been a challenging process. Swiss Re followed a highly consultative, bottom-up process to develop the target operating model, which had the benefit of achieving buy-in but required significant management time and resources. Executive, top-down mandates on some key organizational changes and design principles at the outset could accelerate the process; however, firms need to balance this with allowing team managers to develop their own solutions to meet the objectives of the program. These managers need to deliver the solutions day-to-day after all. An important requirement regardless of the approach chosen is to build sufficient challenge into the process from outside the Risk Management function. This will ensure that changes are addressing the needs of all stakeholders, and are made in full awareness of leading practice benchmarks.
Process standardization and transparency
The second key lever for implementing change is to make processes more transparent and standardize them where this makes sense. This is not to be mistaken for a SOx-type documentation exercise covering the whole process landscape. The key at Swiss Re was to be selective: the target operating model process is being used as a mechanism for testing with team members which processes suffer from lack of clarity on responsibilities and which could benefit from simplification, standardization and automation. These will then be further documented and standardized. Following standardization, centralization is a further action that is open to companies (especially those with offshore service centers, like Swiss Re) to further reduce costs where possible. The lesson learned here is to be smart about which processes are looked at, and define these in terms of the ultimate services or outputs that are delivered.

Data, IT and models
Companies need an IT architecture that offers cost-efficient support while also supporting efforts to standardize and industrialize business processes. This should enable the convergence of risk, finance and capital management, and facilitate the efficient development of risk and finance scenarios across the business.

At Swiss Re, the program has had a dedicated “risk infrastructure” work stream from the beginning, which has owned the detailed future state architecture vision. This team operates to some strict design principles to seek efficiency gains and simplifications in the “as is” landscape, but also to integrate new requirements identified by capability enhancement projects in the rest of the program.

Some of these design principles include:

- Ensuring that the first line of defense has systems in place to provide the necessary information of sufficient quality to allow risks to be measured, monitored and managed
- Implementing a minimal systems infrastructure within the Risk Management function that fully leverages the first line’s information without duplication
- Integrating the data and systems landscape between business management, finance, risk and actuarial, so that the finance systems are at the core and there is zero duplication of data or processing to support risk analysis; this requires IT systems with integrated data architecture, which enable more efficient and standardized analyses and reports that can speak to the variety of reporting needs across stakeholder groups
- Balancing flexibility and necessity by making systems bespoke and flexible only when this adds demonstrable value to the organization
- Ruthlessly decommissioning any systems that have had a material part of their functionality replaced by a new application
- Supporting the transparency of risk data, which should always be a resource for the wider business, not a resource for the Risk Management function

Although fully common data and systems between risk and finance would be ideal, this would be too challenging to implement in practice. As such, the IT landscape should be scoped and designed carefully from the outset: areas where full leverage is not possible will require automated reconciliation.

A significant success at Swiss Re was achieving cross-functional buy-in to a new, integrated landscape blueprint, which is now in the process of being implemented. The challenge will be maintaining momentum for the three-to-five-year time span to implementation.

Cultural change
Cultural change is probably the most important lever for achieving the goals set out above, but also the most difficult to implement. One of the key challenges of successfully implementing and maintaining this kind of change is in convincing people that they should change: not because they have been told to do so, but because it is the right thing for the business. This will be key in ensuring that the changes that are implemented are really embedded and sustainable and, therefore, last beyond the end of this phase of work. It is the people who will continue to shape the risk culture going forward and who should understand and be actively engaged with risk management.

One thing we have noted in the Swiss Re program is that there is no “silver bullet” for achieving cultural change: it is the cumulative effect of a number of “nudges” that gradually change behaviors. Some of these nudges are quite powerful and need to be implemented at the start:
1. It is important to have the right incentives in place to encourage the desired behavior: ideally, key staff should be measured based on intelligent risk-taking, with risk culture and behavior forming a key element of any incentives. At Swiss Re, all executives in key risk-taking positions have risk-based return or demonstration of appropriate risk culture as part of their goals, and the Risk Management function is also being offered incentives on its level of support and enablement to the business.

2. Setting the right tone from the top is essential: senior executives are the public face of risk management success, as well as business success more generally, and they need to ensure they are communicating this message properly and encouraging leadership at every level of the business to also communicate this message to their staff.

3. Education is essential to ensure people in the business know about the risk tools and techniques available: it is also necessary to provide training to those in the Risk Management function to ensure that they understand and are up-to-date with business issues. One way that this can be facilitated is, for example, by regular staff rotations between Risk Management, Finance and the wider business.

Alongside these nudges, cultural change is all about coordinated, sustained communication of the changes being made to the business and everyone’s role in these changes. At Swiss Re, this change program has the following elements:

- **Top down:** a cascade process to drive the ownership and sustainability of the process. This starts with a series of workshops with executive management to explain the vision and to facilitate thinking about how they will contribute to the change from within their divisions; they then facilitate a follow-on workshop with their team leaders with the same objective, and these team leaders then repeat the process with the next level down. Currently, this has only been within the Risk Management function, but the bigger challenge is to eventually expand this more widely in the business.

- **Bottom-up:** “Change Ambassadors” embedded at various levels of the business can be used to support volunteer projects within the overall change program: they will be responsible for communicating positive elements of change back to the wider business. Structured regular communications about how the projects within the program are changing the working lives of real people in the business can help bring the program to life for all employees.

It should be noted that the changes highlighted above are part of an ongoing program of work. As such, this paper presents a snapshot of some of the current areas where value has been added, and of some of the current challenges. The approach continues to evolve and lessons are continually being learned.

**What firms should do now**

In choosing to implement a vision for a more intelligent, embedded and efficient risk management practice, Swiss Re is continuing to refine and adapt the translation of its vision into a long-term strategic practice for their business. Although this phase of work is ongoing, there are some initial findings and observations that any business thinking about implementing a similar program of enhancement should consider:

- Businesses should start the process of thinking about their risk management capability and should consider whether it is likely to be fit for purpose for the future of their company.
- As a first step, they must be able to respond to regulatory requirements and articulate their vision for risk management and must be able to describe the outcomes they wish to achieve, at least in the medium term.
- They should talk to and get buy-in to the proposed changes from people across the entire organization.
- Firms should consider seeking an external perspective on best practice from outside the organization. As an example, Swiss Re sought input from a range of external sources, including CROs from within and outside of the financial services sector, regulators, rating agencies and academics.
- Most firms have a good base for enhancement and, as such, need only to define their focus areas for change based on current performance rather than needing to overhaul the whole business, or go into too much detail with this gap analysis. Firms should invest some time up front to identify areas where improvement will add the most value so that the business has a clear focus and change strategy, thereby preventing change fatigue. Consider developing a clear target operating model that maps all the key risk management activities (identification, assessment, monitoring, execution and control) to relevant owners in the business and risk management.
- Businesses undertaking such a program need to define concrete targets based on measures of success for each of the focus areas: these can be measurable targets (such as for productivity or efficiency), as well as more subjective ones.
Quick wins are possible to demonstrate value, but businesses should also approach the project with a long-term horizon and recognize that some of the changes that they would like to make (for example, data and IT overhaul or cultural change) will take several years to implement.

This intelligent culture of risk, if embedded efficiently and effectively, can potentially add value to the business, enhance existing processes and ultimately help businesses continue to manage and mitigate the existing and emerging risks that they continue to face in a changing world.
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