

MILLIMAN RESEARCH REPORT

Enterprise risk management: Global best practices and key challenges in Asia

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1. Introduction

A strong risk management function within an insurance company allows threats to be managed and opportunities to be captured across every unit and level of the enterprise. Taking a holistic approach to risk enables organisations to optimally prioritise responses and allocate resources to manage risk exposures. It can also help identify significant risks that may have been overlooked through traditional compliance risk management practices.

Recently, there has been an increased focus by many regulators, industry associations and insurers to enhance the role of risk management in an insurance company's strategic decision making. This continues to be the case across the world, with significant moves in Asia in recent years. There has also been a variety of industry research establishing a strong correlation between well-developed risk management functions and the share price performance of listed companies.

Developing a risk management framework is an ongoing process that involves strategy and objective setting, risk identification, risk assessment, risk monitoring and risk incidence procedures. A well-defined framework addresses such items as the interaction of the executive risk management committee with the staff who are identifying risks, the criteria for measuring the likelihood and severity of risks and the design of questionnaires, workshops and other methods of identifying risks. With such a risk management programme in place, a company can improve the quality of internal and external customer service, protect its financial and human capital resources and safeguard the organisation's reputation.

To help provide a richer understanding of developments in risk management, Milliman has produced this report based on interviews with nine leading life insurers operating in Asia. Our interviewees have operations in the 12 largest insurance markets¹ in Asia² and have a combined market share of more than 50% in six of the 12 countries. The objective was to map the journey towards global best practice of risk management capabilities, from viewing risk management as a control function to becoming a provider of value-added insights to the business, and to ultimately assume a leadership role as a business partner advising on key decision making.

This report examines risk management best practices from our observations during the discussions with participants, global regulatory developments and global Milliman insights. We also discuss key challenges and areas of focus for the development and evolution of risk management in Asia.

¹ The 12 countries are China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam.

² Source: Swiss Re Institute, Sigma Explorer, available at <http://www.sigma-explorer.com/index>.

2. Executive summary

A strong risk management function enables a company to take strategic and operational risks more consciously and consider the risk/reward trade-off during early stages of initiatives to ensure sustainable value growth and protection for its shareholders and policyholders.

As part of the study we identified key areas of focus for the development of risk management and have highlighted the major challenges faced by our interviewees in the Asia region under each of these areas in Figure 1.

FIGURE 1: KEY AREAS OF RISK MANAGEMENT FOCUS

AREAS OF BEST PRACTICE	CHALLENGES OBSERVED IN THE ASIA REGION
Senior ownership and sponsorship for risk management	<ul style="list-style-type: none"> ▪ Obtaining consistent board and senior management sponsorship. ▪ Demonstrating the value added by risk management. ▪ Regular risk function representation at board and on key executive committees.
Senior management remuneration incentives	<ul style="list-style-type: none"> ▪ Integrating risk management views with performance management and key performance indicators (KPIs). ▪ Regular training and education of board and senior management on risk initiatives and related matters.
Risk authority and responsibility	<ul style="list-style-type: none"> ▪ Ownership of risk assessment and management at each critical juncture. ▪ Creating an organisational structure that embeds and encourages a healthy risk culture. ▪ Implementing and embedding a clear 'three lines of defence' (3LOD) model.
Identification and reporting of material risks	<ul style="list-style-type: none"> ▪ Developing consistent reporting tools such as a risk checklist, risk register, risk heat maps and risk dashboards. ▪ Technical and actuarial staff skills training and development. ▪ Assessment of quantitative and qualitative risk exposures, including operational and emerging risks.
Risk appetite and limits	<ul style="list-style-type: none"> ▪ Board ownership of risk appetite at respective group, regional and local business unit levels. ▪ Risk appetite statements defining quantitative, qualitative and strategic risk exposures. ▪ Setting exposure limits for each material risk based on the insurer's risk capital and appetite.
Staff expertise and skills	<ul style="list-style-type: none"> ▪ Formalised process of interaction among group, regional and local business units to identify and develop required skill sets. ▪ Development of a team with balanced abilities, including a range of technical and soft skills. ▪ Focused investment in recruitment and training.
Risk capital planning	<ul style="list-style-type: none"> ▪ Developing risk-based economic capital metrics. ▪ Consistent implementation and use of economic capital metrics across group, regional and local business units. ▪ Use of economic capital metrics in forming management's view of capital budgeting and risk-adjusted returns.
Stress testing as a part of the risk management process	<ul style="list-style-type: none"> ▪ Use of stress testing, beyond basic regulatory requirements, for use in business and strategic planning. ▪ Developing a stress-testing framework that includes severe stressed situations and formulating management responses in recovery scenarios. ▪ Use of stress testing to quantify emerging and remote risks.
Risk assessment for new products and ventures	<ul style="list-style-type: none"> ▪ Engaging and ensuring representation of risk management function from outset in key decisions. ▪ Strong risk representation to provide robust and independent challenge.
Risk culture	<ul style="list-style-type: none"> ▪ Clear and open communication channels established among group, regional and local business units, and across function lines. ▪ Embedding an enterprise-wide risk culture, with strong board and senior management sponsorship.

There is increasing recognition globally of the value that can be added by strong risk management frameworks, integrated into strategy and capital planning, which provide insights into decision making.

In Asia, while risk management is gaining wider visibility and appreciation, board members and senior executives continue to look for evidence to justify the financial and business costs of upgrades to their risk management processes. Even where senior sponsorship is observed, many companies struggle with driving the effort through to completion, and quite a few risk management processes are in need of some substantial improvement to deliver a more compelling value-added proposition.

For the participants of our study, even trendsetters have weaknesses to address, while transitionals and beginners must improve their execution of basic risk management functions. Addressing some of the key challenges in Asia listed below would help improve the development and execution of risk functions:

- Building a business case to obtain senior ownership and buy-in
- Establishing risk management frameworks with clear ownership and responsibility
- Creating quantitative risk assessments and reporting for all key risk exposures
- Attracting and retaining the right staff talent and skills
- Embedding risk considerations in senior management performance measurement

Focused investment to develop best practices would help build a risk management framework that creates measurable value while making enterprise-wide risk management much more effective at responding to a rapidly changing risk environment. As the world of risk and risk management continues to rapidly evolve, it is important to remember that risk management processes and activities can offer immediate value to the business, while evolving and becoming an embedded strategic partner to the business over time.

3. Global best practices in risk management

A policy of best practice is a powerful tool to communicate and focus an organisation’s efforts towards the implementation of a fully articulated risk management system. Such a statement, consistent with a company’s corporate culture and risk profile, provides the kind of direction and guidance for risk management that a mission statement can provide for strategic planning. As with the mission statement, best practices are most effective when developed and owned by the senior group most responsible for the success of the risk management programme of the company.

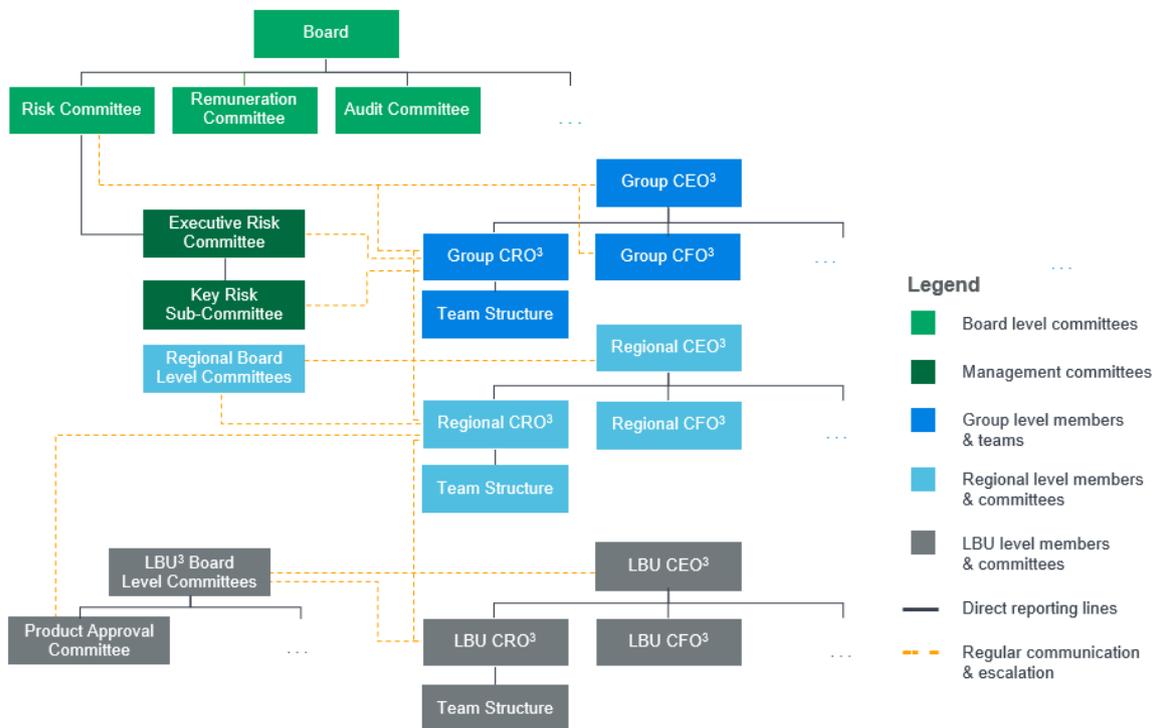
Based on our observations in the Asia region and across the world, we set out below the key focus areas of best practice in embedding enterprise risk management (ERM) within an insurance company.

“Risk is our business ... risk-taking is fundamental to the purpose of an insurance enterprise.” - survey participant

3.1. GROUP STRUCTURE

For the risk function to develop into a value-adding partner of an insurance business, it is vital for the function to have sponsorship of the board. The degree of sponsorship can be gauged by the company’s structure and representation of the risk function in key board-level committees. The chart in Figure 2 sets out an example of a reporting and committee structure that supports a strong risk management function.

FIGURE 2: REPORTING AND COMMITTEE STRUCTURE EXAMPLE³



³ LBU is defined as local business unit; CEO is defined as chief executive officer; CRO is defined as chief risk officer; CFO is defined as chief financial officer.

Group Structure: Key Attributes Observed

Reporting and team structures

- The CRO has a direct reporting line to the CEO, with regular and active communication between group, regional and LBU CROs, leading to a clear track for LBU CROs to escalate risk-related issues. To encourage the ability of LBU CROs to escalate risk-related issues, it is important to maintain an independent communication line between the LBU CRO and the group/regional CRO, where the LBU CRO reports into the LBU CEO.
- Sufficient resources allocated to the risk function reporting into the CRO, with a team structure that has clearly defined roles and responsibilities. Some examples of key team roles within the risk function may include financial risk management, enterprise risk management, risk and governance framework, operational risk management and model validation.
- Reporting and team structures established at group, regional and LBU levels should complement each other to ensure effective communication, reporting and issue resolutions.

Committees

- The CRO has representation at the respective board-level committees and the independent audit committee either as a standing member or a regular invitee.
- An independent board-level risk committee exists which is attended by the CEO, CFO and CRO.
- An executive risk committee, chaired by the CRO and reporting to the board-level risk committee.
- The CRO has regular representation in key subcommittees (e.g., executive finance management, remuneration, asset liability management and product approval committees), enabling the CRO to input into key strategic and business planning decisions from the outset.
- The remuneration committee has defined risk management parameters as a key performance indicator for senior management and material risk takers.
- Similar committee structure as in group should be replicated at regional and LBUs, with the principle of proportionality in view.

3.2. EMBEDDING ENTERPRISE RISK MANAGEMENT

We have identified the 'best practice' classifications shown in Figure 3 as key to developing and embedding a value-adding risk management function. Each is discussed in more detail below.

FIGURE 3: BEST PRACTICE CLASSIFICATIONS

SECTION	AREAS OF BEST PRACTICE
3.2.1	SENIOR OWNERSHIP AND SPONSORSHIP FOR RISK MANAGEMENT
3.2.2	SENIOR MANAGEMENT REMUNERATION INCENTIVES
3.2.3	RISK AUTHORITY AND RESPONSIBILITY
3.2.4	IDENTIFICATION AND REPORTING OF MATERIAL RISKS
3.2.5	RISK APPETITE AND LIMITS
3.2.6	STAFF EXPERTISE AND SKILLS
3.2.7	RISK CAPITAL PLANNING
3.2.8	STRESS TESTING AS A PART OF THE RISK MANAGEMENT PROCESS
3.2.9	RISK ASSESSMENT FOR NEW PRODUCTS AND VENTURES
3.2.10	RISK CULTURE

3.2.1. Senior ownership and sponsorship for risk management

The board has a primary responsibility for ensuring that senior management develops and successfully implements a strategy that optimises the use of available resources to provide value growth for shareholders. To sell new business by attracting and retaining customers, insurance companies must assure those customers that the company will be able to pay claims many years into the future. A risk management programme that builds a track record of claims payment and profitable business management should be a significant factor in providing this assurance. Therefore, risk management is a fundamental responsibility of the board of insurance companies in two ways. Firstly, it is fundamental to their responsibilities to the shareholders. Secondly, it is key to the execution of any insurance company's business strategy.

3.2.2. Senior management remuneration incentives

Senior management should understand the basis of the risk management system. For this purpose, it is essential that members of senior management recognise the risk management activities of the firm. Their judgment and critical skills will be employed in identifying and controlling risks as an automatic and integral part of their day-to-day activities. To this end, it is important for the risk function to take responsibility for carrying out regular risk training and workshops for senior management and board-level committee members. To embed the understanding and importance into an enterprise's risk culture, it is essential to have a balanced scorecard with risk assessment established for key risk performance indicators of senior management.

3.2.3. Risk authority and responsibilities

Risk authority and responsibilities need to be clearly defined, with risk measurement and management independent from risk-taking functions. The responsibilities should be documented to ensure that roles are clearly defined throughout the organisation. The risk framework of companies should also identify individuals accountable for risk and other individuals secondary to the decision-making process.

The roles and relationships among compliance, risk management and internal audit should also be clearly defined. Compliance and internal audit may be viewed as monitoring functions, whereas risk management should be closely integrated with the business units, while not being a party to the decision making. Separation of duties is necessary to prevent conflicts of interest between staff members rewarded for risk-taking and staff members responsible for identifying risks. This separation of roles and responsibilities is akin to implementing and embedding a clearly defined 3LOD model.

3LOD Models⁴

In a 3LOD model, management control is the first line of defence in risk management, the various risk control and compliance oversight functions established by management are the second line of defence and independent assurance is the third line of defence.

- The **first line of defence** (functions that own and manage risks) is formed by managers and staff who are responsible for identifying and managing risk as part of their accountability for achieving objectives. Collectively, they should have the necessary knowledge, skills, information and authority to operate the relevant policies and procedures of risk control. This requires an understanding of the company, its objectives, the environment in which it operates and the risks it faces.
- The **second line of defence** (functions that oversee or specialise in compliance or the management of risk) provides the policies, frameworks, tools, techniques and support to enable risk and compliance to be managed in the first line, conducts monitoring to judge effectiveness and helps ensure consistency of definitions and measurement of risk.
- The **third line of defence** (functions that provide independent assurance) is provided by internal audit. Sitting outside the risk management processes of the first two lines of defence, its main roles are to ensure that the first two lines of defence are operating effectively and advise how they could be improved. Tasked by, and reporting to, the board or audit committee, it provides an evaluation through a risk-based approach on the effectiveness of governance, risk management and internal control to the organisation's governing body and senior management.

⁴ Extracts from Institute of Internal Auditors Global position paper: The Three Lines of Defence in Effective Risk Management and Control.

3.2.4. Identification and management of material risks

For material risks to be identified and measured, all exposures should be aggregated such that management can focus on the largest exposures. Companies should involve all key risk owners in the identification of risk. A common approach is to enable comparison and aggregation of risks. A practical risk assessment and risk quantification checklist should be developed to assess capital adequacy. In addition to a risk checklist, risk register, risk heat maps and risk dashboards should also be adopted for risk identification and quantification, including periodic internal risk reports such as the own risk and solvency assessment (ORSA). A key area of development is to identify and quantify emerging risks.

Own Risk and Solvency Assessment

The ORSA is defined as a set of processes constituting a tool for decision-making and strategic analysis. It aims to assess, in a continuous and prospective way, the overall solvency needs related to the specific risk profile of an insurance company.

The European Insurance and Occupational Pensions Authority (EIOPA) defines the ORSA 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.'*

Article 45 of the EU Solvency II directive framework states (extract):

1. *As part of its risk-management system every insurance undertaking and reinsurance undertaking shall conduct its own risk and solvency assessment. The assessment shall include at least the following:*
 - a) *the overall solvency needs taking into account the specific risk profile, approved risk tolerance limits and the business strategy of the undertaking;*
 - b) *the compliance, on a continuous basis, with the capital requirements...and with the requirements regarding technical provisions...;*
 - c) *the significance with which the risk profile of the undertaking concerned deviates from the assumptions underlying the Solvency Capital Requirement...*

4. *The own risk and solvency assessment shall be an integral part of the business strategy and shall be taken into account on an ongoing basis in the strategic decisions of the undertaking.*

The risk management process requires evidence that a monitoring procedure is in place and that risks are being actively managed. To maintain both quality and timeliness, every element of activity must be documented and logged. Measurement itself is only part of the process. With such a wealth of information, it is necessary to structure the information, so the important exposures are brought to the attention of management at the right levels. The systems in place will depend on the size and diversity of the firm. In small companies with a simple mix of business, static periodic reporting can often be employed to provide management with necessary measurement information. In a more complex environment, there must be a system of filtering so that, when material control limits are breached (e.g., counterparty, target solvency level, reinsurance exposure), reporting to the correct management level or escalating to group or regional offices is triggered. A red, amber, green (RAG) classification framework could be used, if the level of reporting is to be correctly identified.

To maintain relevance and effectiveness, risk management systems and reports must be reassessed on a regular schedule and whenever losses (either by the company or by another company) occur, or as best practices develop further.

3.2.5. Risk appetite and limits

Defined risk appetite statements, which are owned by the board, should exist for key risk exposures such as regulatory capital, internal economic capital, liquidity, financial strength and the qualitative business strategy. There should be risk limits and a system for embracing them for all material risks as well as an internal control system relevant to the risks of the firm.

Companies should set exposure limits for each material risk type. They include short-term limits, volatility exposure and long-term exposure limits, which can be measured by the risk capital of a product or venture, and the limit set based on the insurance company's capital and appetite for risk.

Each potential indicator should be assessed and carefully selected as the measure providing the most meaningful information. Specifically, it is important to see whether an absolute figure, rate of change, or particular ratio will serve as the best indicator of underlying risk with the data available in a reasonable timeframe.

As part of setting risk appetite, a company should also identify its risk preferences, i.e., stating which risks it is actively seeking, which risks it will accept and which risks it would like to avoid. A qualitative assessment of risk preferences combined with the quantitative aspects of risk appetite would provide a more holistic approach to risk management.

3.2.6. Staff expertise and skills

The firm should have staff with sufficient expertise to perform the risk management functions and offer adequate systems support. The risk function should be staffed by appropriately trained individuals who have a clear mandate in areas such as methodology development, reporting and specialist support, including emerging risks, such as cyber risk, that may not have been part of a risk team in the past. Risk managers, with sound technical and actuarial abilities, and internal auditors will play key roles in controlling risk limits and adding value through risk systems.

All functional areas of a firm must be aligned to the risk management policy of the firm and employ sufficient experts in their particular business units. All areas of the firm must have well-defined areas of accountability and must define the expertise and staffing levels required to manage the risks. This necessitates a training and competency process ensuring that suitably qualified staff are recruited and retained.

“Risk managers should champion the awareness and development of risk management systems...” - survey participant

3.2.7. Risk capital planning

Risks associated with business units and products should be identified and used for capital budgeting purposes. This can be determined by a number of processes, including regulatory or rating agency formulae (with or without company customisation), and unique internal models or regulatory-compliant internal models.

Once the company determines the overall risk capital level, an allocation process must be developed. Capital usage over a time period is defined as the net change of risk capital for a business plus the net income of the business. Capital budgeting is the process of choosing and approving plans for capital usage that maximise the fulfilment of corporate goals for the amount of capital used, followed by monitoring the usage and effectiveness as plans turn into reality.

Capital and financial reporting must reflect two aspects of risk in developing a risk-adjusted return:

1. Risk of company failure
2. Losses that are expected to occur less frequently than the length of the reporting period

3.2.8. Stress testing as a part of the risk management process

Many risk metrics provide information on the probability that a company's capital will be adequate without necessarily providing information on the specific economic scenarios that may cause the company's capital to be impaired. Stress testing is a key tool in assessing the sensitivity of an insurance company to major shocks in the underlying economic and noneconomic environment in which they work. Understanding of the full nature and shape of the risks of the company is improved by a stress-testing process.

Stress tests can be:

- Subjectively determined to assess specific problem situations
- Reproductions of historical situations
- Extreme scenarios generated by a stochastic model, as with the complex models used to determine risk capital

Stress scenarios can also be used to test and improve the control mechanisms of the company. Often these scenarios present situations where it would no longer be 'business as usual.' Dividend policies and investment philosophies may need to be changed. Certain contract provisions may also need to be enforced. Control mechanisms are needed in an extreme situation, and a stress test can help the company understand whether existing control systems work effectively in both favourable and unfavourable conditions. Stress testing can also be used to develop management plans and recovery action plans for dealing with stressed situations. A stress test can be used as a management simulation exercise to work on real-time responses that will be required of management in terms of actions to take and public statements to make.

3.2.9. Risk assessment for new products and ventures

Potential risks should be considered during the product development process, while risks should be reflected in product pricing and premium rate setting, as well as in investment decision making. Sometimes a potential new product or venture has risk characteristics that fall outside existing procedures and guidelines. The process of evaluating the risk characteristics of the new venture can become key to the ultimate implementation decision. There should be processes to:

- Identify, evaluate and quantify the risk
- Determine current and historical market prices for the risk
- Study the historical record of losses from the new risks
- Develop a view of future frequency and severity of losses
- Be able to place the new risk within the spectrum of risks the firm currently takes

During the product development process, insurance products should be priced to cover the expected value of future claims (the expected losses) plus the cost of capital of the risk capital, and deliver profits.

3.2.10. Risk culture

A working definition of risk culture, as used in the article 'Enterprise risk culture – from elusive phenomenon to pragmatic solutions,' is as follows:

An organisation's risk culture is formed by the 'behavioural rules' created by both an organisation's leadership and its staff in the process of achieving its goals within a specific set of environmental conditions.

These 'behavioural rules' can be observed in the actions taken, the actions not taken and interactions between organisational members, in relation to managing risks.

A strong risk culture can further support and foster the risk management in the business.

Communication and interaction are fundamental in facilitating an understanding of the risk of the firm's activities among different parties, including senior management, other lines of defence and LBUs and establishing the company risk culture. In establishing a company's risk culture it is essential that it is not limited to the members of the company but communicated and extended to all stakeholders, including, but not limited to rating agencies, investors, analysts and shareholders, in order to develop a shared vision. Companies can develop the shared vision with external stakeholders by education and sharing of information on risk management through presentations and annual reports.

4. Evolution of risk management in Asia

In this section, we discuss the key areas of focus emerging from our study for improving risk management in Asia and highlight some of the key challenges faced.

In this section, we also show the responses from the study participants to our risk pulse survey, including commentary.

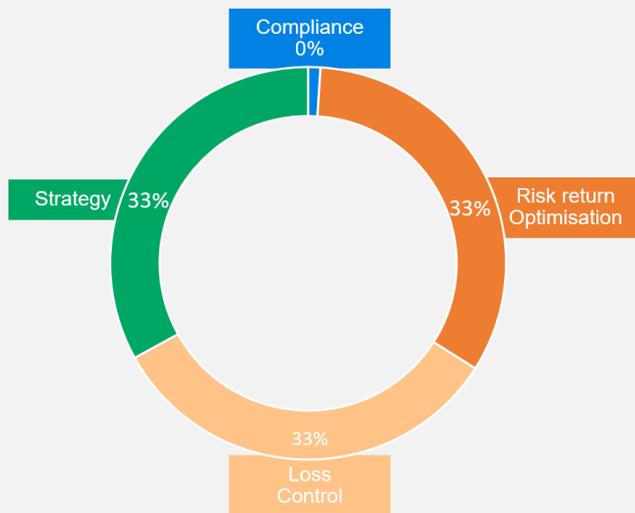
To identify the stages of evolution of risk management within organisations, we have categorised companies as:

- **Beginners:** Tend to reactively respond to incidents and focus on limiting losses. Risk is typically managed in silos. These companies are at the early stages of considering or implementing ERM as a process that creates value.
- **Transitionals:** Proactively identify important business risks and have formalised an ERM programme that allows for a degree of risk return optimisation but require further development in terms of integration and collaboration.
- **Trendsetters:** Create value through ERM and their risk management practices are an important consideration in the strategic planning process. CROs of trendsetters formalise the ERM process and embed it more deeply such that value creation is more sustainable.

FIGURE 4: SELF-ASSESSMENT OF A COMPANY'S RISK FUNCTION ROLE



Survey question: What stage of development, in the evolution model above, would you categorise your Company's risk function to be at?



Source: Risk Pulse Survey conducted by Milliman.

Observation: A third of the study participants identified their respective risk functions as still being focused on loss control rather than risk return optimisation or strategy integration.

Across the participants of this study, the self-assessment of the company's risk factor role is quite varied, although none of the participants views itself as having risk management purely for compliance purposes.

Regulations can support the advancement of ERM practices. In particular, companies with parents that need to report under a global regulatory framework tend to have more sophisticated frameworks. Regulations aside, we also observe that companies are increasingly placing more value on ERM, and see it as a partner for making better decisions and to improve business processes.

4.1. SENIOR OWNERSHIP AND SPONSORSHIP FOR RISK MANAGEMENT

For the risk function to develop into a value-adding partner of the business, it is key it to have sponsorship of the board and executive management. The board of directors has a primary responsibility for ensuring that senior management develops and successfully implements a strategy that optimises the use of available resources to provide value growth for shareholders.

The participants with group offices located in Europe viewed their group risk functions as being more advanced in performing forward-looking assessments, whereas risk function capabilities of insurers with Asia-based headquarters were typically less developed. The primary reasons identified for this were limited sponsorship from the board or senior management for an independent regional risk function, and limited risk representation at key committees, restricting ability to input into strategic decisions. Even where participants highlighted that sufficient sponsorship and budget existed, it is often difficult for risk functions in the Asia region to perform a more comprehensive, forward-looking role because of resource and skill shortages. In Asia, resources are typically allocated to 'firefighting' or resolving operational and day-to-day issues, with insufficient allocation of time or resources to adequately understand strategic and emerging risks. This in turn restricts the ability of the risk function to exhibit its potential as a strategic business partner with a value-adding role towards achieving long-term objectives.

For a forward-looking function that is a strategic partner in decision making to develop, consistent sponsorship is required to allow enhancements of processes to efficiently identify, measure, monitor and report risks. In time, this allows more resources to be devoted to the identification and quantification of emerging and strategic risks.

Board Education

From beginners to trendsetters, risk reports are submitted to the board, but there remains a significant deviation in how much detail risk-related matters are discussed at that level. For trendsetters, we see that their board members typically receive some sort of training sessions on risk or have more intimate one-on-one sessions with CROs. That said, the majority of the study's participants acknowledge that training for the board is on their 'to-do' list.

Education and training in risk management for the board is important so that it is not only closely attuned to the company's risk profile, but also is in a position to provide suggested improvements to the ERM framework. Board-level engagement is critical to the success of initiatives aimed to improve ERM processes, and to facilitate any need to justify the value of risk management to top management.

“The challenge is for senior management and the board to diagnose whether their organisations are truly embedding a 3LOD framework that assists risk considerations and defines a risk culture across the organisation.” - survey participant

4.2. SENIOR MANAGEMENT REMUNERATION INCENTIVES

FIGURE 5: MANAGEMENT KPIS AND PERFORMANCE REVIEW REFLECTIVE OF RISK OBJECTIVES

Survey question: To what extent are management's KPI's and performance reviews reflective of risk objectives and/or include a performance review from a risk perspective?



Source: Risk Pulse Survey conducted by Milliman.

Observation: Almost all the participants we interviewed have implemented at least qualitative measures when assessing management performance in the context of risk management.

Senior management should understand risk management activities undertaken by the firm and the basis of the risk management system. To embed the understanding and importance into an enterprise's risk culture, regular risk training and workshops for senior management and board-level committee members should be conducted. Additionally, it is essential to have a balanced scorecard with risk assessment established for risk-related KPIs of senior management.

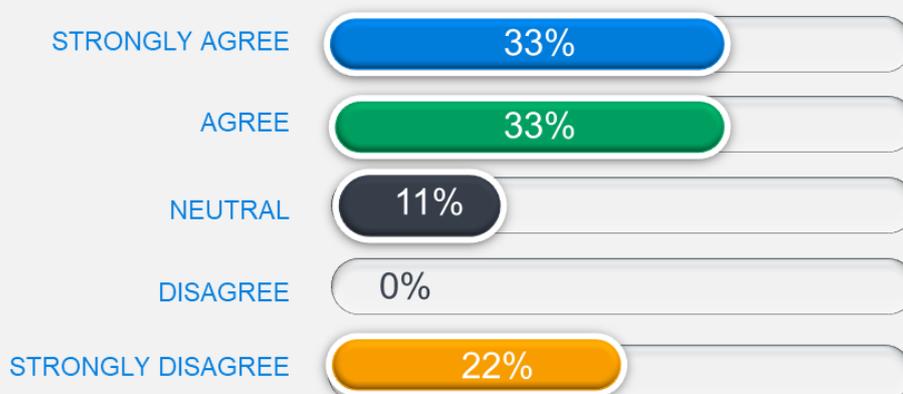
Integrating ERM with performance management will incentivise top management to view risk as an evaluator of the company's overall health and help it manage risk-taking activities against the company's risk appetite. One common tactic that some companies are deploying to tackle the cultural transformation is to merge risk-adjusted performance into incentive compensation structures. According to our study, this level of sophistication is not yet commonplace in Asia, as many companies are still struggling to evolve their ERM programmes beyond a qualitative state. This is a necessary interim step before ERM efforts can be integrated into capital and strategy analytics as well as to drive behaviours.

Almost all the participants we interviewed have implemented at least qualitative measures when assessing management performance in the context of risk management. CROs typically have some say in remuneration and performance review but are not directly involved in the setting of KPIs. Some companies are considering or have already adopted the level of internal economic capital as a management KPI.

“The goal of ERM is that everyone in some capacity, becomes a risk manager.” - survey participant

FIGURE 6: FUTURE FOCUS FOR CROS WILL BE ON TANGIBLE VALUE CREATION

Survey question: To what extent do you agree that the future focus for CROs will be on tangible value creation; i.e. CRO's performance objectives aligned with corporate earnings, efficient capital allocation and profitable growth?



Source: Risk Pulse Survey conducted by Milliman

Observation: A majority of the participants believe that future focus for CROs will be on tangible value creation (as defined above). Going forward, it is likely that we will see more companies incentivising the right risk behaviours by building risk-related KPIs into the remuneration structures of senior management and material risk takers.

4.3. RISK AUTHORITY AND RESPONSIBILITIES

Responsibilities should be documented to ensure that roles are clearly defined throughout the organisation. Separation of duties is necessary to prevent conflicts of interest between staff members rewarded for risk taking and staff members responsible for identifying excess risks. This separation of roles and responsibilities is akin to implementing and embedding a clearly defined 3LOD model.

While 3LOD is practiced by all participants of this study at some level, the greater the number of stakeholders involved, the greater the need for a mature and transparent framework. For most participants, there is at least some documentation to evidence that the 3LOD exists, with roles defined at a structural level for each line of defence. Each of the three lines can communicate both formally in management meetings and in informal settings. However, in practice, the implementation of the framework varies across companies, with some lacking the necessary specificity to make it meaningful.

Even while structures may be in place on paper, there can still be confusion in practice as to who plays which role for which process from the relevant teams. For example, one participant of the study noted that some first line functions of a company do not believe that risk management (or assessment) falls into their jurisdictions. Most participants agree that communication across the lines of defence could be improved and some processes could be further reviewed, noting that further work is still required to embed an enterprise-wide risk culture.

By constantly referring to, but not actually implementing, the framework, a false sense of security can be given to a company's board and senior management. The challenge is for them to diagnose whether their organisations are truly embedding a 3LOD framework that assists risk considerations at each decision-making stage, and to define a risk culture across the organisation. It is important to note that rigorous implementation of 3LOD requires clarity of thinking and determination in execution.

4.4. IDENTIFICATION AND MANAGEMENT OF MATERIAL RISKS

FIGURE 7: PERCENTAGE OF TIME THE RISK FUNCTION DEVOTES TO MANAGING THE BUSINESS RELATIVE TO FULFILLING THE REGULATORY COMPLIANCE REQUIREMENTS

Survey question: How much time does the Risk function devote to managing the business relative to fulfilling the regulatory /compliance agenda?



Source: Risk Pulse Survey conducted by Milliman.

Observation: A third of the participants stated that a majority of the risk functions time is devoted to business and strategic management compared to fulfilling regulatory compliance requirements. However, the participants' views on the respective risk functions' capabilities to perform forward-looking assessments embedded within current operations vary significantly.

Risk management processes require monitoring to be in place such that risks are actively managed and reported. Important reporting tools such as a risk checklist, risk register, risk heat map and risk dashboards should be adopted to ensure timeliness and quality of risk reporting to senior management, along with periodic risk reports such as the ORSA. Participants of the study highlighted that, despite procedures, risk tools and structures being in place, there still seems to be a high level of dependency on staff skills and availability for the risk identification process. This increases the 'key man' risk for some of the participants, and hence the importance of recruiting, training and retention of key skill sets. Some participants identified the lack of technical ability and an understanding of organisational priorities as leading to the risk of key periodic risk reports being limited to numeric updates on what is known and emerging risks not being captured sufficiently.

Quantitative risks have traditionally had more focus due to the resources available to assess them. Given the long-term nature of a life insurer's liabilities and potential duration mismatch between assets and liabilities, market and risks related to asset liability management (ALM) are particularly important, and thus a natural focus for companies.

However, greater focus is required in assessing and managing qualitative risks, such as reputational and regulatory risks, operational risk and emerging risks, such as cyber risk. This includes the ability to assess qualitative and emerging risks, facilitate a resolution and recovery strategy, embed a holistic view of enterprise-wide risks and understand the interactions among these risks.

Operational risk continues to be an area which requires greater attention despite recent investment by firms concentrated on managing this risk. Insurers continue to be exposed to operational risk, which is often due to legacy systems and manual-intensive processes (e.g., claims management) that are still in place. Study participants also highlight the risk of operational issues being exacerbated due to an overload of information provided by LBUs, leading to group and regional teams spending excessive time and resources on understanding and filtering immaterial items. Greater focus may be required on change and project management and information technology (IT) development to better manage operational risk exposures.

Companies also identified a need to focus more on emerging risks where workshops and forums could be created for key staff to 'scan the horizon' for potential risk events. However, the focus is currently limited, as many companies find it difficult to allocate resources to the identification of emerging risks with the priority given to quantifying existing identified risks. Examples have been noted, especially by those categorised as trendsetters, of emerging risk assessments being conducted at a qualitative level. However, further enhancements are still required to be able to quantify and assess the implications of emerging risks. This could be assisted by enhanced stress and scenario testing.

Cyber risk is a key emerging risk that has been receiving increasing management focus. While more resources are being allocated to train staff, build controls and seek advice to manage cyber risk, greater development is still required to effectively manage this risk, and embed its awareness into companies' risk cultures. Insurers are also considering fast evolving areas such as insurtech and the use of technology such as artificial intelligence (AI) and chatbots. There is an awareness of the need for companies and the industry to develop a better understanding internally of their risks and implications.

Trendsetters typically appreciate the extent of the investment required to build a risk capability that works closely with the business to provide new levels of insight that extend beyond the management of risk and they are making these investments. Transitionals identified the development of risk frameworks at the LBU level as a key area of focus for the future. Trendsetters already tend to have risk registers, risk dashboards and holistic risk reporting largely in place, along with an internal economic capital measure. Trendsetters also produce respective periodic ORSAs at group, regional and LBU levels, and in some countries (e.g., Singapore) the ORSA is a formal regulatory requirement.

Beginners and transitionals have generally highlighted that the current priorities are to invest in improving, automating and integrating systems to facilitate aggregate and holistic risk reporting. Future investment in ERM for these participants will be more focused on technological solutions, with the development of systems, e.g., credit limit monitoring and review, as well as operational risk assessment.

Cyber Risk

Recent cyber attacks, such as WannaCry ransomware, which infected more than 230,000 computers in over 150 countries, has raised increasing concerns of the risk arising from cybersecurity lapses at both a personal and a company level. A number of industry players have identified cyber risk as one of their main concerns in their annual reports.

In order to better prepare companies for cyber risk, the US National Institute of Standards and Technology (NIST) first published its cybersecurity framework in 2014 and updated the draft in 2017. The framework consists of five main functions, namely identify, protect, detect, respond and recover. On February 16, 2017, the New York Department of Financial Service (NYDFS) announced the adoption of a new cybersecurity regulation for financial service institutions. Under this regulation, insurance companies are required to prepare a detailed cybersecurity plan and enactment, with a senior role for information security and a reporting system specifically for cybersecurity events.

Although these regulations are not implemented in Asia, cyber risk is on the agenda of all of our participants and several regulators. Among interviewed companies, only a few have a clear strategy or a separate team assessing the cyber and information security threat. Some of the following cyber risk mitigation practices are being considered or have already been adopted by some participants:

- Set up a separate team and risk committee with a focus on cyber risk and information security risks.
- Have cyber risk as a standalone item in the agenda of board-level committees.
- Develop guidelines, handbooks and training on cyber risk for staff.
- Seek external expertise for consulting advice on management of cyber risk.
- Purchase cybersecurity and privacy liability insurance policy.

4.5. RISK APPETITE AND LIMITS

Defined risk appetite statements, owned by the board, should exist for key risk exposures. Companies should set exposure limits for each material risk based on the insurer's capital and appetite for risk.

For the participants of the study, risk appetite statements have generally been set at group levels and have then been cascaded down to regional and LBU levels. For beginners, the group-driven risk appetite is seen to be adopted without much evidence demonstrating input and reflection from the board at regional and LBU levels. Although consistency in risk appetite statements would be expected across a group structure, there is still an expectation of ownership of risk appetite by respective boards at regional and LBU levels. For trendsetters, evidence has been observed of ownership at regional and LBU levels for setting risk appetite along with limits reflective of respective key risk exposures and strategic growth aims.

Additionally, for trendsetters, risk appetite statements are not limited to only quantitative capital measures. Good examples of risk appetite statements have covered the following areas:

- Regulatory capital solvency, with no appetite for regulatory noncompliance
- Internal economic capital solvency
- Financial strength
- Liquidity
- Earning volatility
- Business practices (qualitative), managing reputational and operational risks

4.6. STAFF EXPERTISE AND SKILLS

FIGURE 8: RISK FUNCTION INVESTMENT NEEDS

Survey question: Currently, where does your risk function require more investment: talent or technology?



Source: Risk Pulse Survey conducted by Milliman.

Observation: Between talent and technology, an overwhelming majority of participants view talent as the more worthwhile investment at their current stages of development.

Beginners and transitionals have a continued focus on human resources, from increasing resources available to training of current resources to enhance skill levels, especially IT-related skills.

An embedded risk culture and sponsorship from senior leadership, with defined strategic priorities, are regarded as key areas to identify needs for the development, training and recruitment of skilled staff. A lack of sponsorship often restricts the ability of the function to invest in recruitment and training of the skills required for sound risk management, even where known skill gaps exist. Restructuring within the risk function or the organisation as a

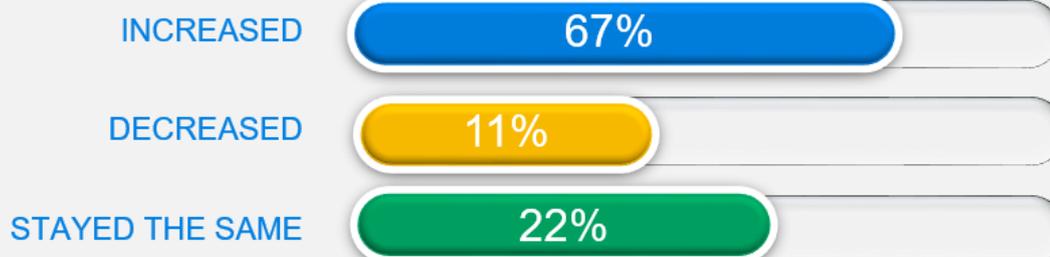
whole is at times seen to be beneficial for identifying key skill gaps and requirements, although overly frequent restructuring is also identified as a hindrance to establishing an organisational risk culture and adding to the confusion of strategic priorities. Developing risks (such as cyber or regulatory) and industry areas (such as insurtech use of artificial intelligence) also drive skill needs and gaps.

Beginners and transitionals, especially, noted that a lack of technical and actuarial expertise increases the level of dependency of the risk function on other first line of defence functions. This reduces its ability to consolidate and investigate the root causes of risk issues. This is particularly noted as an issue for participants where no independent modelling team exists within the risk function, or it does not have sufficient resources allocated for model validation. Participants noted this as restricting the function to risk reporting rather than 'best-in-class' forward-looking risk management.

Participants mentioned the difficulties they are facing in recruiting and training staff with balanced technical and non-technical softer skills, where staff are able to complement technical risk expertise with an understanding of business dynamics and operations. An overarching area of focus is the development of skills to be able to carry out materiality assessment for technical issues identified, critically analyse emerging issues, and other softer skills, such as project management, prioritisation of issues and communication in order to ensure that deliverables are met and stakeholder buy-in is obtained.

FIGURE 9: YEAR-ON-YEAR BUDGET FOR THE RISK FUNCTION

Survey question: Year-on-year has the budget of your risk function increased, decreased or stayed the same?



Source: Risk Pulse Survey conducted by Milliman.

Observation: Two-thirds of the participants have increased risk function budgets over the past year, and most of these investments are utilised to increase headcount for the risk team.

We observe that recruitment and retention of skilled staff is also dependent on the location of operations. Operations at regional Asian hubs tend to fare better in attracting skilled staff, whereas this can pose a far greater challenge for local Asian entities. Trendsetters with a strong Asia regional risk office referred to established interactions across regional and LBUs as key to identifying and developing the required skill sets.

Encouragingly, all the participants in the beginner category have seen increased risk budgets in the past year and are expecting further increases in the coming year. Some companies with no increase in investment, or even a decrease in investment, noted that the tighter resources mean that more work is expected to be spread across the current resources, with some 'dual-hatting' of roles expected.

Good practices noted by participants included:

- Regional office's involvement in identifying skill gaps and recruitment of staff at the LBU level
- Engagement and training of staff across regional and LBU levels, including movement of staff across offices and departments in order to gain an understanding of organisational priorities and risk exposures

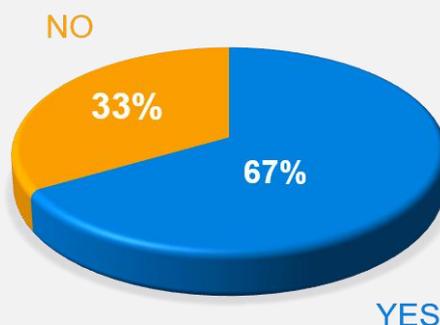
An established recruitment and training framework can help identify and fill skill set gaps.

4.7. RISK CAPITAL PLANNING

For appropriate allocation of risk capital to business units and products, it is important for a company to develop economic or internal capital models that are reflective of management's view of risk-adjusted returns and potential severe risk scenarios. Two-thirds of the participants indicated that they currently either calculate economic capital or have an internal model in place.

FIGURE 10: ECONOMIC CAPITAL AND/OR INTERNAL MODEL

Survey question: Do you currently calculate economic capital and/or have an internal model in place?



Source: Risk Pulse Survey conducted by Milliman.

Observation: Most participants of the study have either economic capital or internal capital processes in place.

We observe that most companies with internal economic capital frameworks tend to have European parents, although they often do not have an internal model validation team set up at the Asia region level. Participants classified as beginners tend not to have built an internal or economic capital model. These companies also employ limited use of stress and scenario testing.

Participants in the transitional category were noted to be investing in developing internal economic capital modelling and adhering to global regulatory compliance. Where transitionals did have either economic capital or internal capital processes in place, they were mostly employed for reference purposes and implemented mainly at the group and regional levels only. At the LBU level, internal or economic capital processes were observed to be limited only to the largest contributing LBUs. Trendsetters tend to have defined economic and internal capital processes which are monitored against their risk appetite statements. However, consistent application and accuracy of models across the LBUs is open to challenge for trendsetters and transitionals.

For optimum use of such metrics and frameworks, it is essential that they are implemented consistently across LBUs, with the principle of proportionality being applied. Companies also highlighted the lack of skilled resources, including actuarial resources, within the risk function as a key constraint in implementing capital frameworks.

4.8. STRESS TESTING AS PART OF THE RISK MANAGEMENT PROCESS

Stress and scenario testing has been identified by participants as an important tool for the risk function to input into strategy, testing the resilience of the balance sheet and business plan to future adverse events. Regular stress testing could be complemented by periodic strategic 'war-gaming'⁵ and more extreme stress test exercises, helping ascertain management responses and strategic actions to resolve emerging threats to future business plans and strategies. A stress and scenario testing framework should go beyond the basic regulatory requirements and should define company-specific scenarios and extreme stress testing, including reverse stress testing. A stress-testing framework should cover both quantitative and qualitative risk assessments.

⁵ War gaming aims to simulate an interactive business scenario with a dynamically changing business environment. It allows decision makers to consider proactively how different players can react to change, and to each other. It can help challenge biases and assumptions, identify critical gaps and vulnerabilities and provide insights into emerging threats and opportunities.

The lack of consistent use of stress testing, an established model validation team and a model governance framework were also identified as common limitations by participants. The lack of such processes was recognised as a major concern. Moreover, lack of senior management sponsorship and required skill sets were also identified as key hindrances to implement the enhancements required. Where further enhancements are identified and required, for both beginners and transitionals, companies are keen to utilise the upcoming risk-based capital changes in several jurisdictions as a catalyst to implement and enhance the use of internal capital and stress and scenario testing.

Model governance and stress-testing frameworks are essential to ensure appropriate use of capital assessment for risk management purposes. Consequently, it is important that the risk function takes ownership of stress and scenario testing, economic capital metrics and model validation responsibilities, with clear definitions of framework and purpose.

4.9. RISK ASSESSMENT FOR NEW PRODUCTS AND VENTURES

Important activities such as product design, business planning, mergers and acquisitions (M&A) and capital allocation are areas associated with high risk exposure with potential downside impact. To ensure the soundness of these decisions, risk management needs to be involved as a day-one consideration which is typical practice for the trendsetters. Among the transitionals and beginners, we observe that risk management functions are sometimes involved because of a 'push from the back,' and as a result input from the risk management team are at the 'back of the mind' or an 'afterthought.'

4.10. RISK CULTURE

Communication is fundamental in facilitating different parties, including senior management, other lines of defence and LBUs, in understanding the risks of the firm's activities and establishing the company's risk culture.

Lack of an embedded risk culture across an enterprise and limited communication among group, regional and LBU levels, were identified by the study participants as key hindrances in achieving management buy-in and demonstrating the value-added potential of risk management. Such communication is vital in understanding the potential risks of different operations of a firm and understanding their needs. Companies should implement effective bottom-up communication channels, e.g., direct risk reporting lines among group, regional and LBU CROs, clear risk issue escalation processes and active top-down communications, e.g., site visits and regional CRO representation in the business activities of LBUs.

Participants of the study also identified frequent management and organisational restructuring as a hindrance to establishing a risk culture and adding to the confusion of strategic priorities. Such changes tend to be driven at the group parent level.

Once the organisational risk culture is defined, the role of the risk function would then be to provide an independent view and challenge on key strategic and business initiatives as they are implemented, rather than be a consideration at the end of the process. This will enable the company to take risks more consciously, considering the trade-off between risk and reward from the outset. Establishing independent audit and risk committees are also identified as potential areas that would enhance the businesses' capabilities to provide independent challenges on business and strategic decisions, including risk framework and processes.

5. Conclusion

There has been an increased focus by many regulators, industry associations and insurers in recent years to enhance the role of risk management in companies' strategic decision making.

Globally we observe companies developing strong risk management frameworks integrated with strategy and capital planning that provide insights into decision making in response to regulatory requirements, demands from the board for better risk oversight, industry volatility and companies' pursuit of greater competitive advantage. Examples are also observed of regulators encouraging the inclusion of risk considerations in senior management performance measurement.

In Asia, while risk management is gaining wider visibility and appreciation, board members and senior executives continue to look for evidence to justify the financial and business costs of upgrades to their existing risk management processes. Even where senior level sponsorship is found, many companies struggle with driving these initiatives through to completion, with several risk management processes in need of substantial improvements in order to deliver a more compelling value-added proposition.

For the participants of our study, even trendsetters have weaknesses to address, while transitionals and beginners must improve their execution of basic risk management functions. Some of the key challenges in the development of risk functions observed in Asia are:

- Building a business case to obtain senior ownership and buy-in
- Establishing risk management frameworks with clear ownership and responsibility
- Creating quantitative risk assessments and reporting for all key risk exposures
- Attracting and retaining the right staff talent and skills
- Embedding risk considerations in senior management performance measurement

Focused investment to develop best practices, as cited in this report, would help build risk management frameworks that create measurable value, while making enterprise-wide risk management much more effective at responding to a rapidly changing risk environment. As the world of risk and risk management continues to evolve, it is important to remember that risk management processes and activities can offer immediate value to the business while evolving and becoming an embedded strategic partner to the business over time.

Additional Reading Material for Global Milliman Insights

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Appendix A: Acronyms

3LODs: Three lines of defence

AI: Artificial intelligence

ALM: Asset liability management

CEO: Chief executive officer

CFO: Chief financial officer

CRO: Chief risk officer

EIOPA: European Insurance and Occupational Pensions Authority

ERM: Enterprise risk management

EU: European Union

IT: Information technology

KPI: Key performance indicator

LBU: Local business unit

M&A: Mergers & acquisitions

NIST: National Institute of Standards and Technology

NYDFS: New York Department of Financial Service

ORSA: Own risk and solvency assessment

RAG: Red, amber, green

RBC: Risk-based capital

YE: Year-end



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