Working together:
Insights into the Relationship between the CRO and CU/PO

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CRO FORUM

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1 Introduction

Insurance companies are in the business of assuming risk. It may be a fire in a factory or a hospital, an automobile accident, an injured worker, premature death, or a longer-than-expected lifetime. Individuals, businesses, and the government pay insurers to assume the financial risk of these and other events. The business of insurance is making and keeping promises to assume the financial consequences of unexpected events.

Insurers need to have the financial ability to uphold commitments to policy holders and provide to shareholders a return on their investment. To do this, insurers need to manage their own risk. This makes a robust Enterprise Risk Management (ERM) program essential. Via a comprehensive ERM program, insurers:

- Define their appetite for risk;
- Evaluate and understand the risks that they are assuming;
- Develop strategies for managing and controlling risk;
- Implement mitigation strategies; and
- Monitor results of corrective action.

Risk programs are often developed and managed by the Chief Risk Officer (CRO). The CRO is an expert in risk. He or she (along with a team) works with the organization to develop a strong risk management culture and help implement and maintain an ERM program. To be most effective, this requires a good working relationship between the CRO and other leaders in the organization.

The relationship between the CRO and the Chief Underwriting, or Product, Officer (CU/PO) is particularly important. Within many insurers, the underwriting and / or product (depending on the organization) teams assume many of the key risks managed by the company. Strong collaboration between these teams and the risk team is essential for:

- Understanding and monitoring the risks being assumed by the company;
- Developing and implementing the risk appetite and risk limits necessary for the organization;
- Obtaining quick intelligence about changes to the risks that the company is facing;
- Implementing corrective actions when limits are breached; and
- Developing a strong ERM culture in the organization.

As expected, effective teamwork requires a good relationship and effective communication between the leaders of those teams.

A survey of nine key insurers, conducted by the consulting firm Towers Watson, revealed the best practices that characterize a strong relationship between the CRO and the CU/PO.

This paper covers formal and informal interaction of CRO and CUO depicting the outcome of the survey. The formal interaction includes topics as written reports, monitoring risk, committees, sign off and approval procedures and referral and escalation procedures. Roles and responsibilities are discussed in the paper. Other topics include root cause analysis, the independence of the CRO, ownership of risk and reinsurance usage and optimization. Areas for future research and development are identified and finally a set of key best practices is presented.

2 Executive Summary

Recent events emphasize the importance of a strong ERM culture in an organization. Over the last several years, financial services organizations have suffered significant losses due to risk management failures (e.g. AIG, JP Morgan). These failures have affected shareholders, management, customers, and claimants. There have been well publicized industry incidents linked to costly failures which could have been, in part, prevented by stronger relationships between the CRO and parts of the organization that assume risk.

A survey of nine key insurers, conducted by the consulting firm Towers Watson, revealed the best practices that characterize a strong relationship between the CRO and the CU/PO.

Many participants noted that the risk function has evolved from a fairly small, limited, and detached role – just a few years ago – to a much wider role, with greater resources allowing it to be further embedded in the business. This has brought challenges in getting the business to understand the role, but many CU/POs and other senior First Line individuals, recognize the value of the risk function – not least in providing comfort to CU/POs that decisions and processes have been adequately reviewed by an independent team.

While the conclusions in this paper are clearly focused on insurance organizations where the underwriting function is the key risk taker (e.g. a property/casualty insurer or a life insurer emphasizing protection products) these conclusions can easily be expanded to other insurance organizations. For example similar conclusions and best practices can apply between the CRO and the Chief Investment Officer (CIO) in an organization where market risk predominates.

As a whole, the responses illustrate the linkage between the ERM processes and functions throughout the company, and how risk management effectiveness is impacted by the type of relationship that the CRO has with the CU/PO and other business heads.

Conclusions regarding the CRO and the CU/PO relationship are summarized below.

- A keen rapport between these two key executives, with frequent formal and informal communication, is necessary to ensure an excellent ERM process and culture, leading to better risk and business decisions and greater efficiency.
- Informal communication is essential in helping Risk and the business forge a close and efficient working relationship.
- Risk appetite and monitoring form a foundation for managing risk and are typically developed through collaboration between the CRO and CU/PO, and other executives.
- The CRO must have the independence to communicate clearly to the CU/PO and other key executives both favourable and, especially, unfavourable information about the key risks the company faces. CRO fearlessness protects the organization by allowing him or her to challenge others on potentially damaging business activities.
- Independence does not translate to inability to maintain strong relationships with the CU/PO and other key executives.
- Independence is driven not from any particular organizational structure or compensation scheme, but from the skills, abilities, and practices of the leaders – in particular the CRO – and the tone set by the management of the organization.

- The CRO and CU/PO need to have a clear and complete understanding of the organization. Risk leaders must have a good business mind and business leaders a good risk mind.

The paper concludes with key best practices detailed in section 5.

3 Review of Interaction of CRO and CUO

3.1 Formal Interaction

Per the survey, the functions and interactions of the risk department are heavily intertwined with many other employees and departments through committees, reporting, and the day-to-day workload. Hence, it is impossible to limit our review to communication between the CRO and CUO. To understand this relationship, the interactions between the CRO and other key company officers are analyzed as well. Much of the section on formal interaction focuses on important aspects of the CRO and CU/PO relationship and interactions with other executives. A number of areas of formal interaction are reviewed to draw high level conclusions on risk management effectiveness related to the CRO and CU/PO relationship.

Informal interactions and solid relationships are vital to an effective ERM process, although they alone can't support the requirements of a company's risk management process. Formality is necessary for an ERM program to be beneficial. Insurers must satisfy audit and regulatory requirements, which may involve strict documentation, meetings, and adherence to guidelines. Formality also promotes accountability and action (e.g. via risk assessments, control documentation, follow up on action plans, etc.).

3.1.1 Written reports

A great deal of the communication between the CRO and CUO/CPO occurs on an *ad hoc,* informal basis rather than in ongoing, formal meetings; however, quantitative data can often only be shared by written communication. It also provides evidenced documentation of effective governance of risk in the organization and can be used to minimize misunderstanding. Finally, governance and regulatory requirements drive some written communication.

Those surveyed were specifically asked about written reports that are shared between the CRO and the CU/PO. Responses include:

- Reporting on quantitative risk and profitability statistics;
- Regular reporting to management, the Board, parent, and regulators; and
- Meeting minutes (e.g. Risk Committee (RiCo) minutes) documenting conclusions and next steps.

For an effective ERM program, written reporting is essential to the process. Exactly which reports are developed is specific to the insurer. Reports reflect the needs, culture, and risk profile of a company.

Reporting is best accompanied by informal conversations and meetings to ensure comprehension of the reports and the actions that they drive. In particular, the CRO and CU/PO need to clearly understand all relevant management information, and the impact on the organization, so that they can drive necessary changes to promote effective risk management.

3.1.2 Monitoring risk

Independent monitoring of key risk metrics is an important component of effective risk management practices; it promotes timely management action to keep risks within defined risk appetite and, where applicable, risk limits.

Companies were asked "Which risks are formally monitored and by whom?" Responses were summarized as follows:

- Insurance risk (e.g. mortality and lapse) is primarily monitored by the CU/PO; some respondents indicated that the CRO is also responsible for monitoring;
- Market-related risks (Interest rate, Equity, Credit, Exchange rate, Investment strategy execution, Liquidity) are primarily monitored by the CRO or CFO, with fairly equal balance. In a handful of the companies surveyed, the Chief Investment Officer (CIO) is responsible for monitoring market-related risks;
- Monitoring of exposure to catastrophic events (man-made or natural), conflagration hazard and non-catastrophic risks is more or less balanced between the CRO, CU/PO and Reinsurance;
- Adverse loss reserve movement and premium (pricing) risk is primarily monitored by Actuarial; and
- Other enterprise risks (operational, legal/regulatory, reputational) are primarily monitored by the CRO, with some respondents indicating monitoring by CU/PO and other functional heads.

Risk profiles are monitored based on standards, set within the ERM Framework, that uphold accurate, complete, timely, and reliable reporting. These standards require clear and comprehensive documentation for defining, calculating, collecting and aggregating the profile. The establishment, or cyclical update, of the ERM Framework, particularly pertaining to risk tolerance for underwriting, is a key touch point for the CRO and CU/PO. During this process, the Three Lines of Defence roles come into play, as mentioned by the majority of surveyed companies. As a 1st Line function, the CU/PO's role is to manage and increase business, with consideration of earnings and the balance sheet, and to monitor the risks impacting underwriting-related metrics. The CRO (2nd Line) ensures the overall ERM Framework is upheld – that risk appetite and limits fall within the levels defined by the Framework. CROs also provide tools for the business lines to manage risk and guide the CU/PO, and other 1st line leaders, on risk mitigation efforts. Completing the loop, the 3rd line of Defence, Internal Audit, reviews key reporting and monitoring processes for compliance to standards and verifies that controls in place are appropriate and effective.

Outside those directly linked to risk appetite, additional metrics may serve as risk indicators and should be monitored by the 1st Line of Defence in the interest of risk management. These include significant changes in market share (potentially indicating mispricing or ill-advised risk selection), number of pending audit points, total external reinsurers, staff turnover and vacancies, external survey results, etc.

CROs' timely reporting to senior management and the Board brings focus to emerging issues and promotes action plan development and implementation.

3.1.3 Committees – Make up and Functions

A common element of all surveyed entities' risk management environment is the committee structure, although committee membership and focus vary. Committees are an essential part of the ERM framework. They provide a formalized method for discussing, documenting and taking action on key risk issues. They also ensure that all decision makers are informed of risk issues in a consistent and timely manner. Often risk issues that impact a company are first brought to light as a result of committee discussion.

Certainly, a Risk Committee (RiCo) is an essential tool for ERM. A RiCo allows senior management to monitor status of key and emerging risks. In larger organizations risk-related committees are often specialized by risk type depending on the size and nature of the entity, while in smaller entities there may be only one committee focusing on risk, or the Board may serve as the risk committee.

Some, or all, of the following committees are in place within the surveyed companies:

- Risk Committee (RiCo);
- Underwriting Committee;
- Product Approval Committee;
- Reserving Committee;
- Finance Committee (FiCo);
- Investment Committee;
- Asset/Liability Committee (ALCo);
- Reinsurance Committee;
- Executive Committee;
- Audit Committee;
- Operational Risk Committee; and
- Divisional Risk Committee.

As expected, CROs participate in the majority of risk-related committees, although with varying responsibilities.

This chart shows CRO participation within key committees

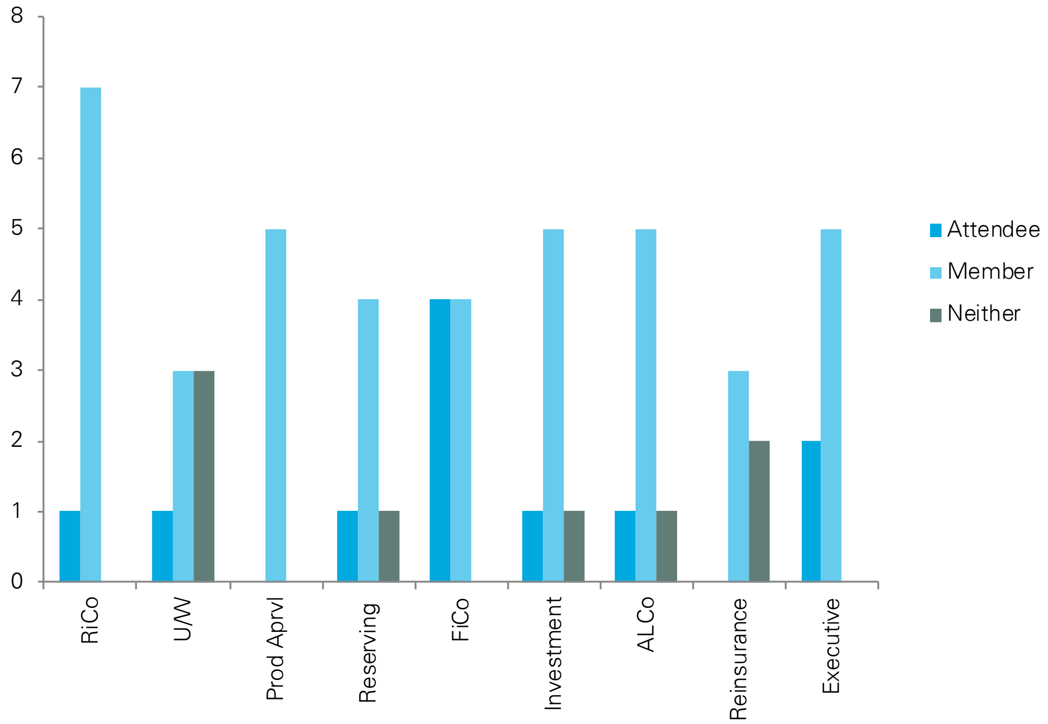

Figure 1: CRO Committee Participation

Of the committees within the chart, formal interaction between CRO and CU/PO most likely occurs at the RiCo and Underwriting Committee. Investment, Reserving, Executive, and Operational Committees were also noted as opportunities for CRO and CU/PO collaboration in a structured setting.

3.1.3.1 Risk Committee

The RiCo is one of the key committees in the ERM framework of an organization. The RiCo is responsible for developing and implementing the ERM program for the organization and is the forum in which major risk issues are discussed and strategies to manage those risks, developed. Specific tasks vary by entity, but usually include setting and monitoring limits, developing risk management measures for Board approval, and other tasks as described in the RiCo charter.

Within the companies surveyed, each RiCo aims to conduct ongoing monitoring of the key risks at the Group level and is often comprised of members of the Management Committee of the entity. The table below shows the various attendees of survey respondents' Group Risk Committees.

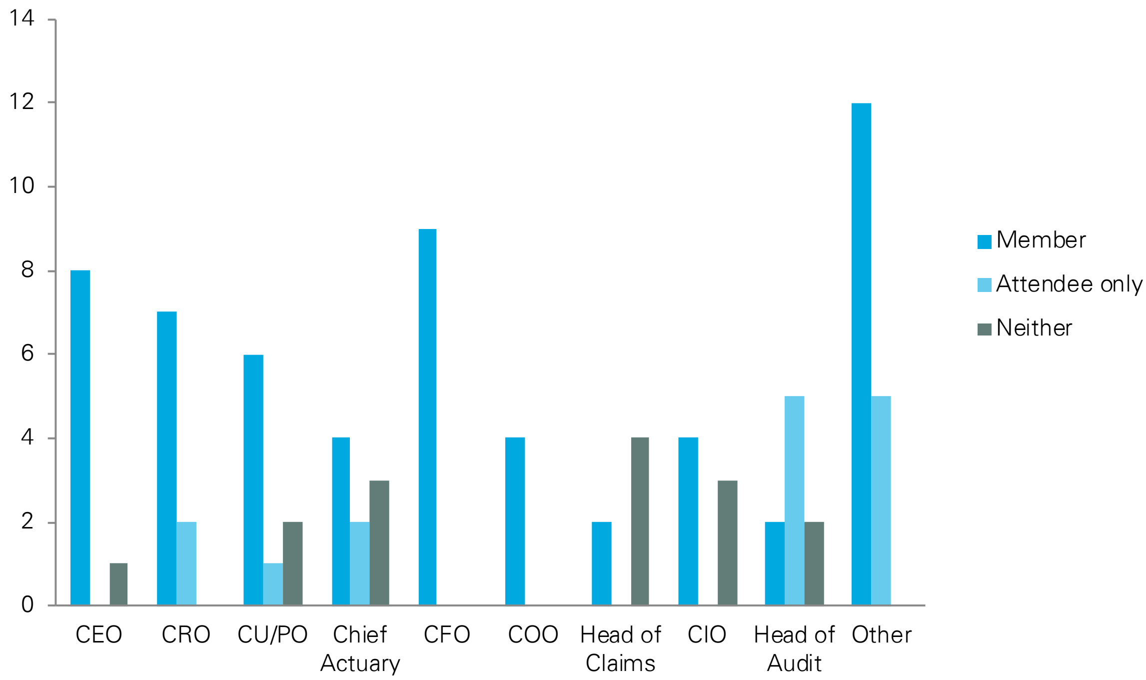

Figure 2: Risk Committee Participants

The CEO is usually a member of the RiCo and the CFO is always a member. The CU/PO frequently sits on the RiCo. Other attendees depend upon the needs of the organization. The participation of a broad range of executives in the RiCo highlights its role as an "executive committee" with a business focus as opposed to simply a control mechanism.

RiCo membership by the CEO is crucial not only to promote alignment between risk and strategy, but also to highlight the critical role that risk management plays in the organization. In addition, where the CRO and CU/PO have a strong relationship, there is a reciprocal benefit in attending each other's committees. The CU/PO should regularly attend the RiCo; similarly, the CRO should be in attendance at the Underwriting and Product Committees, as appropriate. This allows the CU/PO to be exposed to and understand the risk issues and to share underwriting strategies and issues with other RiCo members.

3.1.3.2 Other Committees which deal with Risk Issues

Frequently, other committees deal with risk issues, as well. They may be subsets of the RiCo or independent committees with other responsibilities. Two examples are the Underwriting Committee and Finance Committee (sometimes called investment or asset liability committee). We will discuss briefly the roles of these committees in the risk process.

Finance Committee

The Finance Committee (FiCo) monitors finance-related risks such as Equity Risk, Exchange Rate Risk, Interest Rate Risk, risks associated with investment strategy execution (Hedge Effectiveness), and Liquidity Risk.

The table below outlines key risk types on which the Finance Committee receives monitoring information and is expected to address, as necessary.

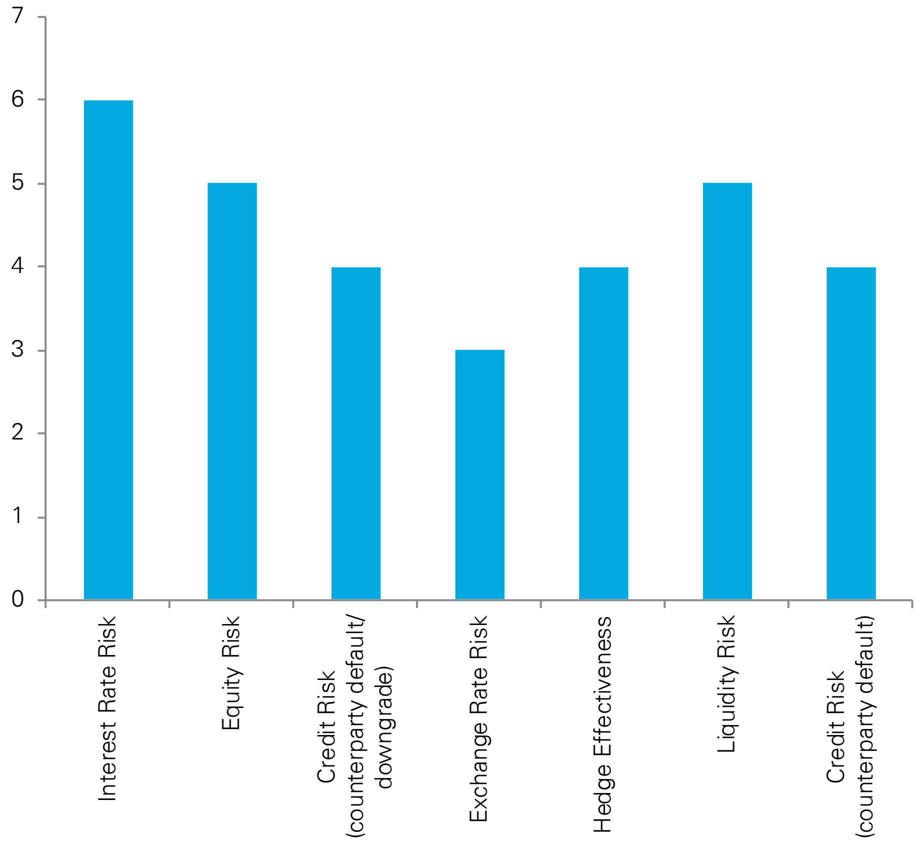

Figure 3: Number of Finance Committees Receiving Information on Risk Monitoring (by risk Type)

Underwriting Committee

Amongst its other responsibilities, the Underwriting Committee must understand and manage a number of risks. There may be a separate Product Development Committee, or the Underwriting Committee may oversee product development. This graph outlines some of the risk types about which the Underwriting Committee may receive information and be expected to address..

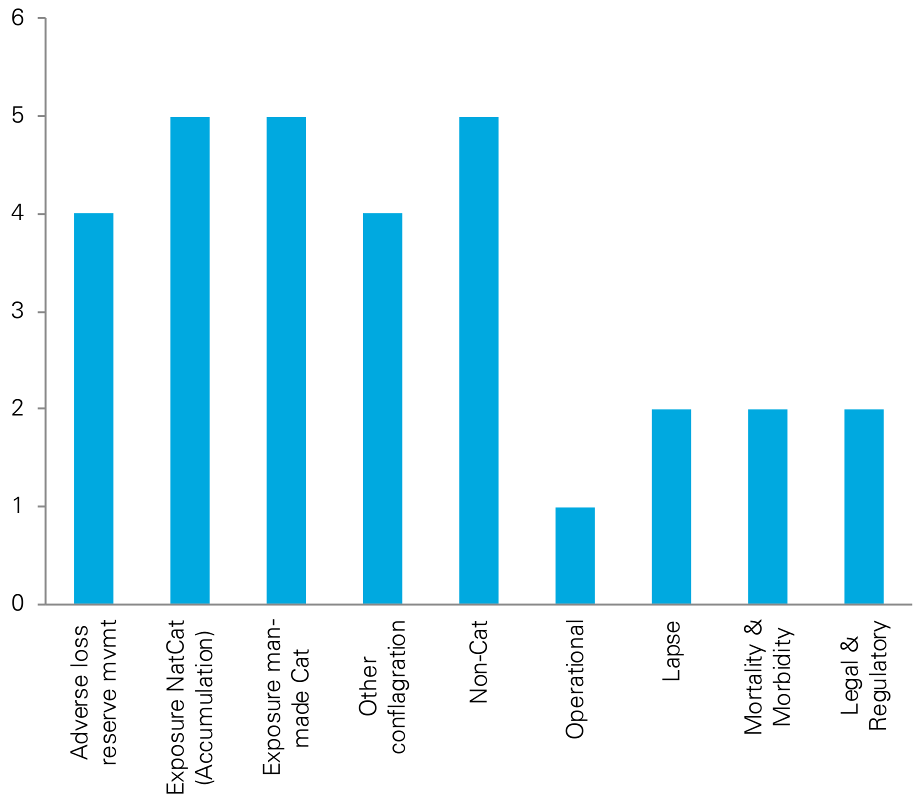

Figure 4: Number of Underwriting Committees Receiving Information on Risk Monitoring (by Risk Type)

When the CRO attends the Underwriting Committee, he or she is able to provide insight as to the risk types which are specifically monitored by the Risk Management department (e.g. accumulation, man-made catastrophe). In addition, the CRO's function allows broad oversight of the risks being monitored and reported by all business areas; he or she can add value to CU/PO-led discussions of these risks (e.g. capital impact, operational risk, etc.) It should be noted that, under Solvency II, the Chief Actuary will opine on the organization's underwriting function, providing an additional layer of oversight.

3.1.4 Sign off and Approval Procedures

As with many procedures and processes, insurers must strike a balance regarding sign off and approval. On one hand, they need to be "fast on their feet"; within intensively competitive marketplaces, companies strive to bring innovative products to market quickly and ensure that changes to policies, procedures and limits are completed and implemented promptly and efficiently. On the other hand, it is possible to overlook an issue that may affect a product, policy, procedure, or limit. For example:

- A quickly emerging risk, not previously a concern to the industry, may cause wide-spread complications and cost companies millions;
- Legislation is introduced requiring the Company to reduce rates and, thereby, limit product profitability;
- A new product may be developed that runs afoul regulatory requirements – wasting development costs and incurring fines; and
- A procedure may be created which requires expensive and cumbersome processing.

Sign off and approval procedures prevent these occurrences.

When a new product, policy, procedure, or limit is subject to sign off, the leaders of affected business units validate, prior to approving, that it will perform as designed and required. This is a final step to ensure appropriateness of the business activity / product / etc.

An important part of any ERM framework is identification of sign off requirements – when and by whom. Sign off and approval procedures are most effective if those signing off:

- Understand exactly what they are to consider and evaluate;
- Thoroughly evaluate each proposal to ensure that it does not adversely affect their area of responsibility or the organization as a whole;
- Consider the proposal's benefits to the organization as a whole; and
- Act promptly in their evaluation and sign off decision.

The CRO and CU/PO each have approval / sign offs assigned to them related to their purview, but there are multiple instances requiring either joint sign off or consultation prior to sign off:

- CUO involves CRO for New Product development and/or analysis prior to rollout;
- CRO and CU/PO discuss new processes;
- CRO and CU/PO act jointly on issues of joint interest (e.g. accumulation); and
- CPO is responsible for reinsurance on new products and collaborates with CRO on retention limit analysis.

3.1.4.1 Risk Strategy and Appetite Statement

An important document, which deserves special treatment, is the Risk Strategy and Appetite Statement[1]. In some companies these are separated into two separate documents.

The Risk Strategy and/or Appetite Statement define the overall risk appetite of the organization, taking into consideration stakeholder expectations. The Risk Appetite drives the limit framework for the organization to ensure compliance with the risk appetite set at the highest level of the

[1] CRO Forum has published a paper on Risk Appetite in December 2013.

organization.. The Risk Appetite / Limit setting process is a collaboration point between the CRO and CU/PO.

Interviewees were asked who approves the Risk Strategy and Risk Appetite. Responses are summarized.

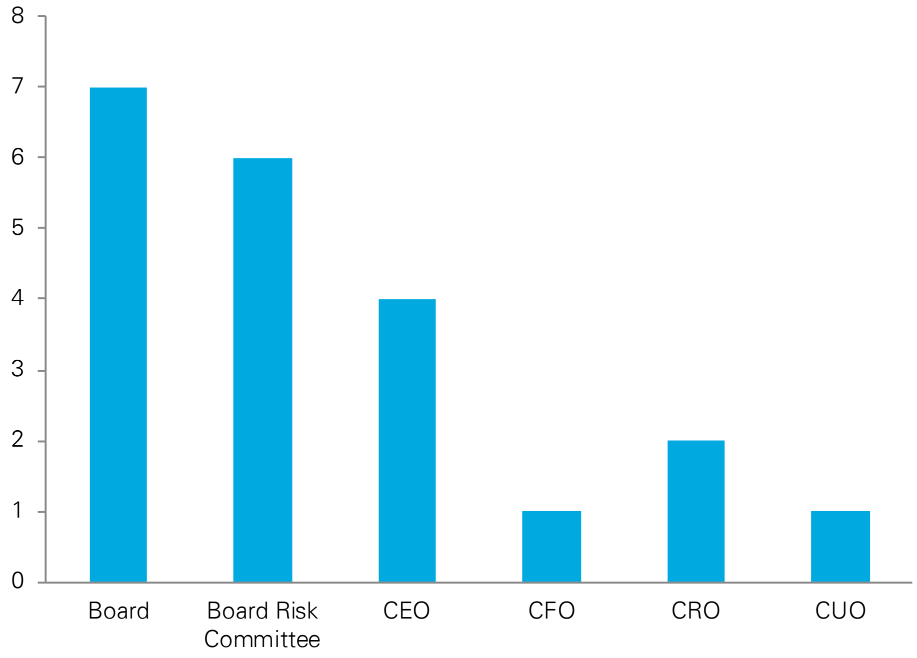

Figure 5: Risk Strategy and Appetite Sign-off and Approvers

In the vast majority of cases, the Board and Board Risk Committee approve this, as evidenced by sign off. Board sign off highlights the significance of this information to the organization and is essential to setting the tone and prioritizing risk management in the organization.

3.1.4.2 Other Areas Requiring Sign Off

There are a number of other areas which naturally, require sign off by both the CRO and the CU/PO. These business areas often experience tactical issues during the normal course of business, rather than strategic issues such as those addressed within the Risk Strategy and Risk Appetite. These issues have been identified as potentially impacting underwriting results or the risk profile of the organization and, therefore, require additional oversight / sign off to ensure multiple experts are aware of the error or assumed risk.

Well-designed sign off and approval procedures support the ERM structure. By requiring sign off, an organization ensures:

- Statements and actions are appropriate for the group;
- Key leaders understand and agree; and
- Stakeholder issues are appropriately considered in decisions.

It should be noted that communication between the CRO and the CU/PO is important to keep this process working effectively. To the extent the CRO and CU/PO communicate about risk issues, the Risk Strategy, Risk Appetite, and sign offs, the risk management program will be further consistent with the goals and culture of the organization and, thereby, more effective.

3.1.5 Referral and Escalation Procedures

Referrals and escalation are powerful risk management tools. If underused for a company's top risks, the probability of a serious risk event occurring is increased. Conversely, if overused, business or productivity can come to a grinding halt as processes are slowed by executives approving transactions and evaluating spurious escalation requests. Worse yet, excessive referrals may result in "rubber stamping" or ignoring escalations, leading to greater probability of a serious risk event.

Sign offs, approvals, referrals, and escalations all are key processes within an effective risk management framework. Referrals and escalation are transaction or event-driven as opposed to sign offs and approval, which are driven by policy changes. Therefore, a company's referral and escalation process needs to be streamlined to incorporate timely identification of an event (e.g. limit breach, policy accumulation, trading error), swift evaluation of the event against the Risk Appetite and Limits (as applicable), and a proper chain of communication for thorough analysis and efficient management of the risk event.

3.1.5.1 Referrals

Examples of referrals are large transactions, unique or large investments, or accounts with specific characteristics (e.g. significant catastrophe exposure, value of new business measures below a threshold). An effective referral procedure ensures:

- The risk appetite and hard limits of the organization are not breached;
- The activity allows the organization to utilize its capital to support other profitable, appropriate activities; and
- The activity does not pose an undue risk to the organization which has not been considered in the risk appetite, limits, or other risk controls of the organization.

Respondents were asked for situations which require referral. The diagram below summarizes the results.

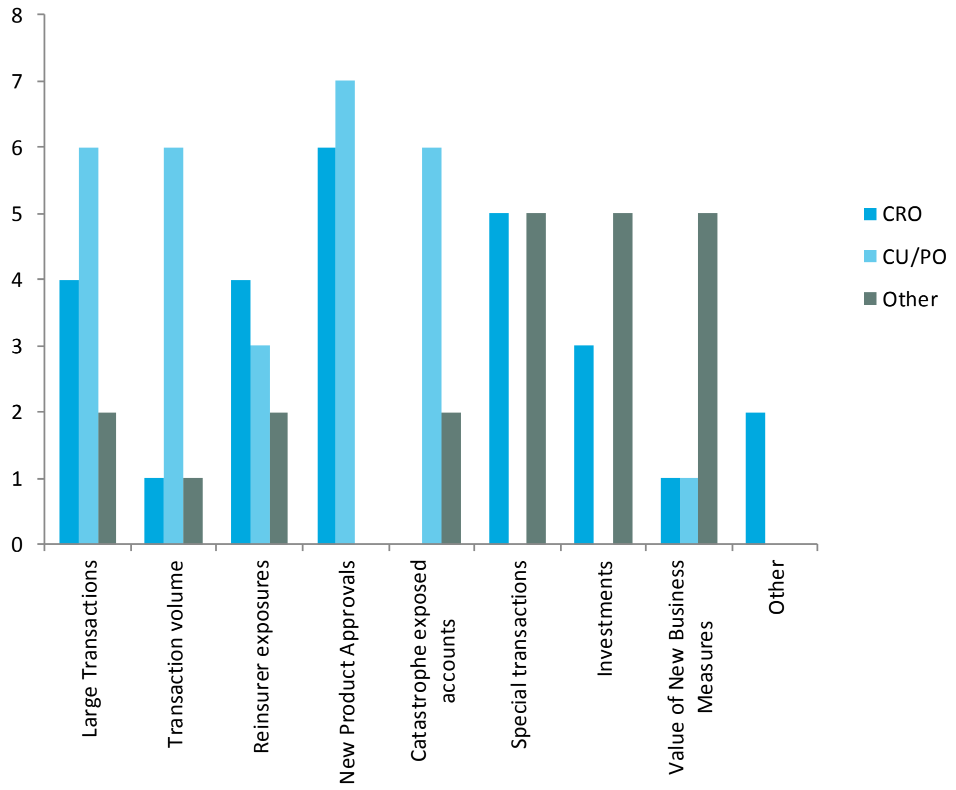

Figure 6: Risk related referral procedures by topic

The graph shows that referral to the CRO and CU/PO is almost always required for new product approvals. In addition, it is often required for reinsurance transactions and large individual transactions. However, joint referral is less often used for other areas, in particular for catastrophe exposed accounts. While this may seem counterintuitive, as the CRO is part of the second line of Defence – monitoring overall catastrophe exposure – it makes practical sense.

3.1.5.2 Escalation

Sometimes, despite best intentions, things go wrong. A limit might be breached. There is an adverse audit result. A reinsurer disputes a liability. Situations like these call for escalation.

Escalation can be thought of as a warning – the situation is deteriorating and the organization must take action before things get worse. Good escalation procedures will ensure that:

- Management is warned quickly of potential or developing problems so that action can be taken;
- Only serious issues requiring senior management attention are escalated; and
- Situations requiring escalation are taken seriously.

The survey asked about the types of events which result in escalation and to whom they are escalated.

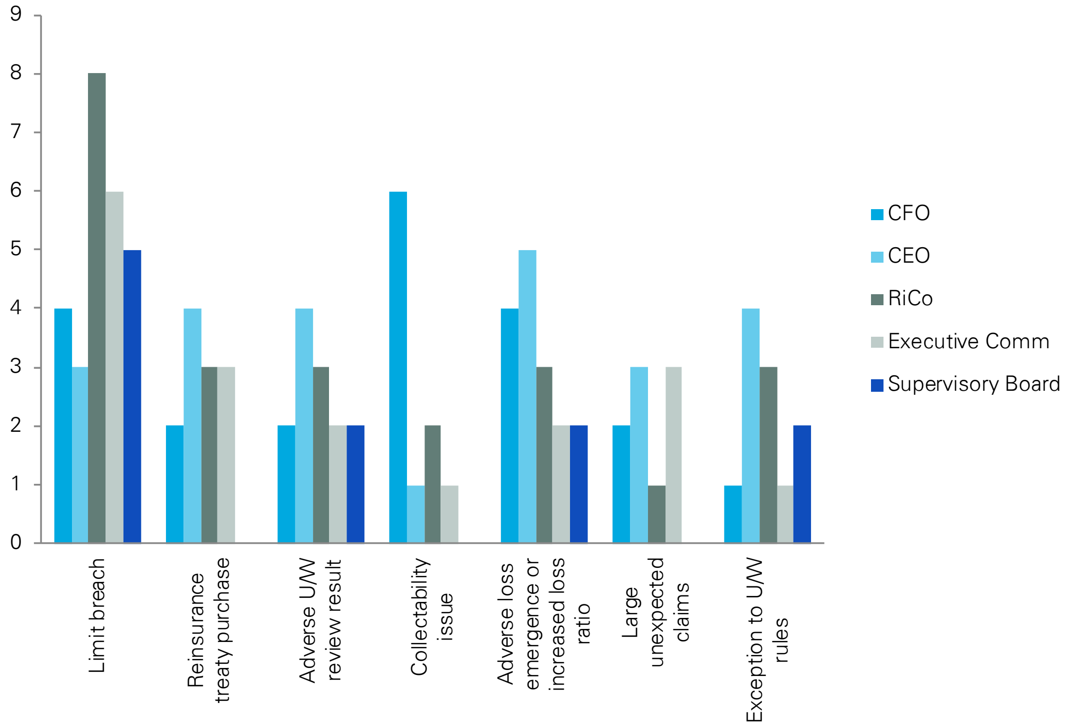

Figure 7: Escalation by Event Type

Survey responses show that escalation is generally focused on the executive most responsible for the risk topic.

Sometimes the risk is not an event, rather, a proposal. This could be a large transaction, investment, or change in underwriting strategy. Often there are disagreements about the proposal. When these disagreements occur, the CRO has a difficult decision – to escalate the proposal (risking the relationship with the CU/PO or other executive) or let it go.

There were a variety of responses around escalating a proposal. Examples include:

- Breach of risk appetite or hard limit;
- Risk of overexposure of the balance sheet; and
- Reputational or conduct risk.

Respondents noted that, in most cases, strong relationships between the CRO and key company officers including the CU/PO, allow informal, productive discussions that lead to positive solutions and limit the need for escalation.

Referral and escalation are powerful tools for CROs to help manage risk. In particular, significant transactions and soft limit breaches should at least involve referral and, possibly, escalation. Organizations that make judicious use of these procedures ensure that:

- Problems are identified and dealt with before they become too serious; and
- Individual transactions do not use up resources (e.g. capital) in a manner that limits other investments.

Yet, referral and escalation are not without risk. A referral or escalation may anger a colleague and result in strained working relationships. This can be prevented with a strong informal relationship between the CRO and 1st Line of Defence leaders of the organization, in particular the CU/PO, allowing for informal discussion and resolution of problems before a referral or escalation is necessary. On the whole, escalation and referral need to be used judiciously; however, the CRO, or others, should not avoid these processes to preserve relationships at the expense of company health or performance.

3.2 Informal Interaction

A key theme of the previous section is the need for informal communication, particularly between the CRO and the CU/PO, to reinforce formal communication and ensure that communication is constructive and respected.

In this section, we consider the impact and role of informal communication. Informal communication can be quite powerful; it allows entities to "connect the dots" to better understand situations and avoid potential crises or risk events. Respondents were asked about the impact and frequency of informal interaction between the CRO and the CU/PO. Responses are provided in the graph below.

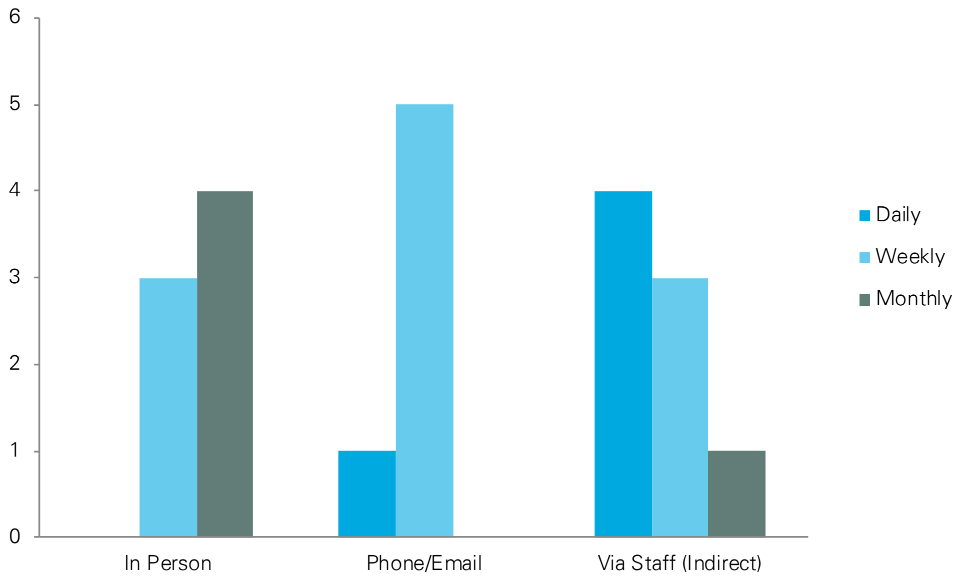

Figure 8: Frequency of Informal Interaction between CRO and CU/PO

The chart above indicates that most companies have frequent interaction between these Officers, either direct or involving other staff members.

Regarding the benefits of informal interaction, the first area considered by the survey was change to tactics and behaviours as a result of informal interactions between the CRO and CU/PO or other executives. Some key changes in tactics and behaviours include:

- Avoiding potentially damaging business propositions;
- Additional focus on limits and accumulation;

- Swift collaboration on key risk issues;
- Improved approach to pricing;
- Increased awareness of risk management and specific risk issues;
- Increased awareness of capital usage;
- Improvement in collection of data related to natural catastrophes;
- Increased awareness of volatility;
- Additional attention to lapse risk; and
- Changes to distribution / sales team training.

Examples of respondents' observations on the benefits of informal interactions include:

- Ability to react more quickly;
- Better decision-making;
- Improved resource allocation;
- More balanced approach to risk;
- Improved loss ratio;
- Better portfolio management;
- Enhanced pricing; and
- More accurate planning.

The benefits of informal interactions cannot be underestimated. Respondents view positive informal interactions as key to a good ERM program and can cite clear evidence of those benefits. Also, as evidenced by the responses above, one of the most important informal relationships is between the CRO and the CU/PO. Clearly, a positive, informal relationship between these executives will generate a more efficient ERM framework.

3.3 Roles and Responsibilities

3.3.1 Independence of the CRO

In order to provide a high level of assurance to the Board, regulators, and other key stakeholders, the CRO operates, to an extent, independently of the company's business line management. Furthermore, the CRO generally has direct access to the Board or Risk Committee of the Board. This reporting line is required by some regulators.

Although the risk function directly influences the company's risk taking activities (e.g. to ensure that activities remain within stated risk appetite and limits), the CRO is generally sufficiently independent to maintain objectivity in assessing, monitoring, and reporting on such activities. The CRO also independently assesses the accuracy of risk information provided by the business so that reporting to the Board and Senior Management remains objective and reliable.

To be most effective, CROs must balance independence with maintaining key relationships in the organization, particularly with the CU/PO, the 'owner' of an insurance company's key risks. It is essential that he or she utilize working relationships to understand the risks that the organization is assuming and influence behavioural changes, but also retain an independent perspective on the company's risk – a view of the forest, rather than the trees.

3.3.2 Clarity of roles – Who "owns" risk

"Risk ownership" is an ambiguous term; all stakeholders and employees of the company have some degree of ownership of risks that the company accepts and manages. However, primary ownership of risks lies with the Board which delegates to business management of the company. Business management holds First Line of Defence responsibilities to ensure that activities around risk taking are conducted with sufficient identification, analysis, mitigation, and communication of the risks, and are within the authority delegated by the Board.

The CRO's role is independent oversight of risk taking and associated risk management activities. Ownership of risks does not generally lie with the CRO. He or she has a key role in shaping the understanding of risks in an organization through the risk appetite and risk appetite framework, and is responsible for ensuring these are effectively executed in the company.

Respondents were asked in the survey, "Who is responsible for management and mitigation of risk?" Key results are summarized below.

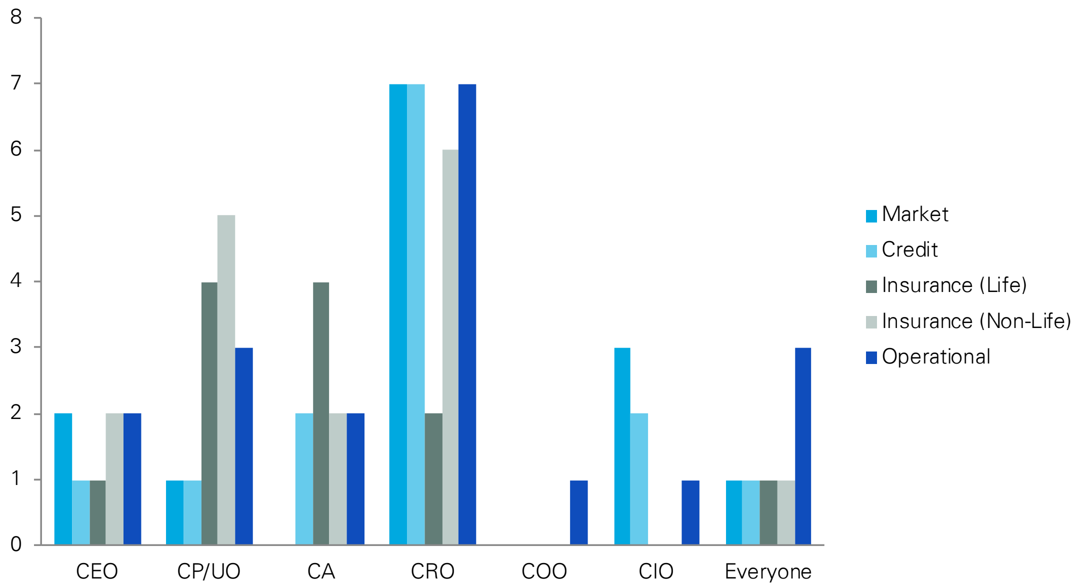

Figure 6: Responsibility for Managing and Mitigating Risk

While the CRO is most often cited as the person responsible for risk management and mitigation, the next most frequently named company officer is the CU/PO, particularly for insurance risks. This highlights the need for the CRO and the CU/PO to maintain an excellent working relationship to encourage the most efficient and effective risk management efforts.

3.3.3 Review and sign off procedure for new products

Product development is an area with a relatively high risk. Examples of the negative consequences associated with new products include:

- Policy provisions that inadvertently result in unintended coverage;
- Vague language that is subject to misinterpretation by policy holders and/or courts;
- Coverage that results in reputational or regulatory risk; and

- Policy terms that do not adequately reflect possible changes in the economic or political environment.

In light of these potential issues, appropriate review of new products, by all relevant disciplines, is especially important.

Conversely, in the competitive environment in which insurers operate, time to market is a key factor to remaining competitive, profitable, and nimble. Lengthy review processes may cost an insurer missed opportunities, either as a result of changes in the economic environment or losing business to more nimble competitors. This is especially difficult for insurers that are subject to pre-approval of products by regulators (e.g. P&C insurers in some US states, life insurance investment products in most jurisdictions).

Survey participants were asked about CRO involvement in the product development process. The results of those questions are shown below.

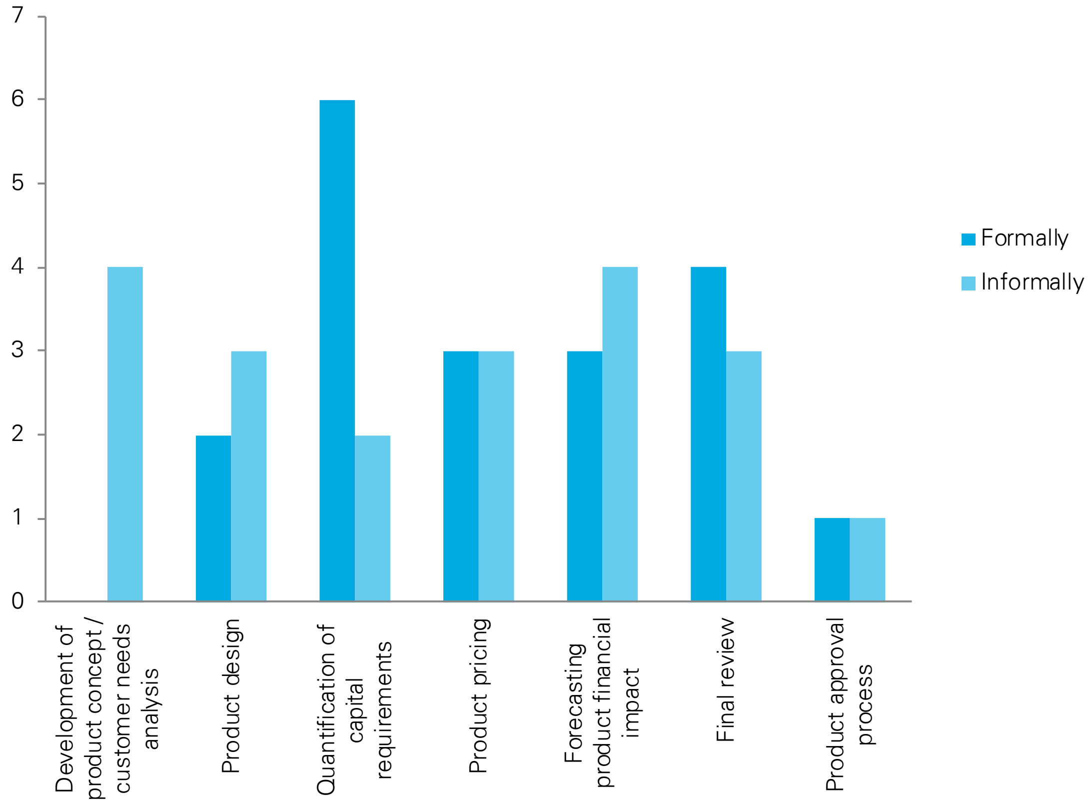

Figure 7: CRO Involvement in Product Development

Most companies include the CRO in quantification efforts; however, increasingly they are included in other stages of product development, as shown. One of the more interesting statistics is that several respondent companies involve the CRO in the original development of the product concept, albeit informally. This type of involvement most likely occurs when the CU/PO and CRO have a strong relationship.

Product approval processes are key risk controls for insurers. Processes that are designed to make sure insurers do not assume unnecessary, unanticipated or excessive risks are essential. Conversely, the processes cannot be so cumbersome as to prevent insurers from reacting quickly within an intensely competitive marketplace. Increasing involvement of the CRO in the early stages of product development helps to speed the process of approval within the company.

3.3.4 Reinsurance Usage and Optimization

Reinsurance is an important tool to manage risk and capital. In fact, reinsurance is often thought of as a method of "purchasing" capital. There are several specific reasons to purchase reinsurance including:

- Provide capacity to be able to write additional accounts or large limits;
- Improve diversification of the portfolio;
- Stabilize earnings; and
- Obtain the benefit of the reinsurer's technical expertise.

Across the companies surveyed, the CRO does not have responsibility for choice of reinsurance structure, reinsurance usage, and optimization. These topics are covered by CU/PO together with reinsurance specialists. Instead, the main focus of CROs is the resulting portfolio after reinsurance. CROs review whether the resulting risks are within established limits and the resulting portfolio is well diversified. This analysis is mainly conducted within the risk analytics team.

Another role of the CRO is the evaluation of the efficiency of the reinsurance structure. One of the benefits that the CRO and his or her team can provide is to understand the volatility of the portfolio and model the cost of reinsurance vs. the cost of capital. By doing this, the efficiency of the reinsurance program can be optimized. CROs have influence on reinsurance usage via participation in setting risk appetite and the risk appetite framework.

The importance of the CRO-CU/PO relationship is evident when considering reinsurance. As stated, the CRO is often not involved in reinsurance decisions, whereas the CU/PO usually is. When the CRO and CU/PO work together, the CRO is more likely to understand the reinsurance decisions and contribute positively to the process. The CRO and team are a prime source of information to help the company optimize the reinsurance structure – controlling risk and saving the company money.

3.3.5 Root cause analysis

Root cause analysis is the post-mortem study of what caused an event or trend which led to a significant loss or near-miss. In theory, the technique is simple. It requires multiple inquiries as to why the loss occurred, in an attempt to recreate the chain of events and pinpoint the core issue – the cause of the cause – in front of which, mitigating actions are the most effective. In practice, root cause analysis can become complex as multiple causes branch off, each with its own set of circumstances.

Usually applied to events attributable to internal process failures, root cause analysis can be applicable to any kind of event. Instances where root cause analysis might be activated include:

- Large unforeseen underwriting losses (e.g. catastrophic);
- Underwriting losses unexpectedly not covered by the reinsurance program;
- Internal fraud or failures in the underwriting processes;
- Unexpectedly high volumes of external fraud in the underwriting or claims processes; and

- Inexplicable worsening trends of legal claims and customer complaints.

For serious adverse events, the most valuable findings are often the underlying management and cultural factors that enabled the vulnerability to arise. These can be difficult matters to investigate, analyze, and document due to their sensitive nature; they may imply criticism of business leaders' actions. Therefore, a good relationship among company officers is essential for a successful root cause analysis. Trust built in a close relationship is very helpful when difficult work needs to be done. This is especially true for the CU/PO, one of the primary risk takers in the company, and the CRO. CEO support of the analysis is vital and it is also helpful if there is recognition of the constructive intent of the exercise – to share lessons learned rather than find blame.

3.3.6 Formal communication and training on risk related issues

To conclude the section on roles and responsibilities, the survey sought further information on how companies improve risk culture and spread information on risks. Also, to what degree both the CRO and CU/PO were included in such processes.

Like all corporate improvement efforts, communication and training on risk related issues needs to take into consideration the skill level and knowledge of the audience. Solvency requirements make clear the need for granular and continuous diffusion of risk culture at all levels of the company hierarchy. Moreover, given the importance of the top down approach, the Board and senior management need sufficient knowledge of risk issues.

Realistically, widespread understanding of risks to the enterprise does not always occur, especially in the implementation phase of risk appetite frameworks and internal models. Knowledge of risk-related issues, and how risk management and businesses interrelate, is typically born within the specific teams that deal with the risks via their daily processes.

Must companies put in place ERM training and communication programs? To what degree are the risk functions and the business functions involved in developing the training?

In answering the survey, companies cited the following tools to communicate and train on risk-related issues.

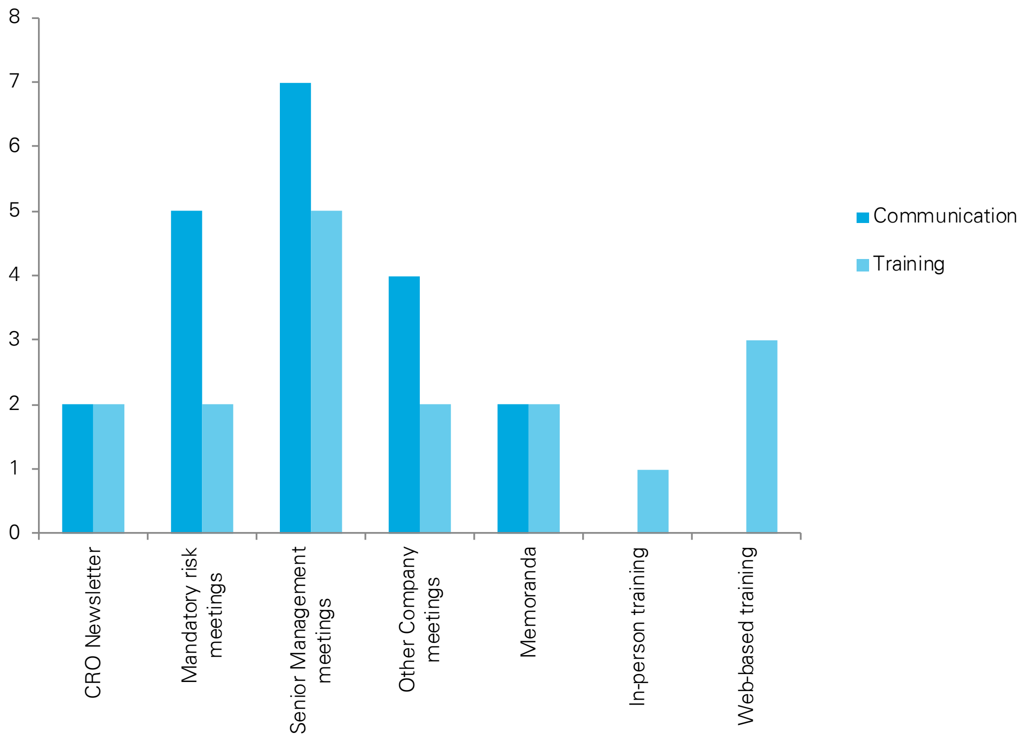

Figure 8: Formal Communication and Training on Risk Related Issues

As demonstrated in the graph, various tools are used in tandem to communicate and train on risk. Use of web-based training could imply that risk-related issues and risk culture is gradually spreading to a wider audience.

Also cited as vehicles for communicating and training on risk related issues were risk committees, documented policies, standards and best practices, Corporate ERM forum (operational level) / Annual Risk and Finance Conference, and facilitated risk discussions.

The CRO and the CU/PO likely have common ground to train and communicate via:

- Reserving principles, strategies and modelling assumptions;
- Risk appetite, risk limits and modelling assumptions;
- Escalation procedures and conflict resolution;
- Segregation of roles between risk management and underwriting; and
- Use of risk measures in underwriting processes (pricing, profit testing).

The underwriting / product development and risk management departments play key roles in developing training and communication. As a priority, and with the goal of fostering increased communication between the teams, risk resources must be trained and knowledgeable in underwriting processes and, conversely, underwriting resources trained and knowledgeable in risk processes.

4 Areas for Future Research and Development

4.1 The Role of the Chief Risk Officer in the Business Planning Process

Managing risk begins with defining risk appetite. With the risk appetite established, the organization is able to more accurately plan growth, portfolio mix, and profitability over a time horizon. Essential input for business planning is the performance of the current portfolio compared to the goals, the risks inherent to the current portfolio, and the capital necessary to support these risks.

Analysis of changes to the environment is important to identify whether risks may change over time (e.g. climate change impacting storm frequency and severity), or whether new risks may emerge (e.g. consequences of new legislation on customer protection, new claims, and current claim run-off).

In business planning, the contours of the portfolio and risks for the coming years are set. Both underwriting and risk management should play a role in planning processes – underwriting generates ideas for portfolio composition, growth possibilities, and methods to restructure the portfolio; risk management ensures the business plan adheres to the risk appetite. A strong CRO and CU/PO relationship helps link these functions and is more likely to result in a business plan that maximizes results within the bounds of the risk appetite. In addition, CROs can have an important role in optimizing risk/return within the business by advising on changes in the risk profile of the company to optimize diversification and capital allocation.

The Own Risk and Solvency Assessment (ORSA), under Solvency II, is a prospective risk assessment and report for which the business plan is important input; therefore, Risk Management should verify consistency between the business plan and the ORSA.

The vast majority of the interviewed CROs stated that they are involved in corporate strategy, annual corporate planning, and Risk Strategy. Almost all of these CROs (two exceptions) are involved in investment strategy, product and reinsurance strategy, as shown in the graph.

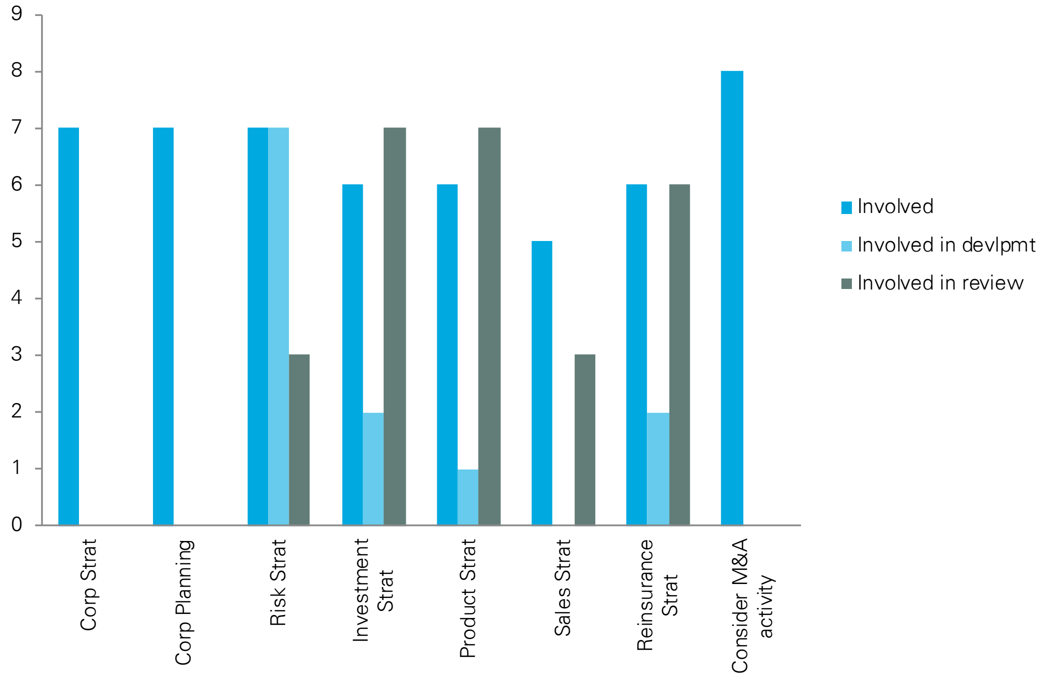

Figure 9: CRO Involvement in Strategic Processes

4.2 Risk Function activities to promote sound Risk Management

The current and future role of the risk function was a recurring theme of the interviews. Initiatives are underway for a closer dialogue between the CRO and the CU/PO. Significant progress has been made primarily noted in the responses pertaining to governance. The transition of risk management, from a technical to an operational function, is frequently mentioned. Further progress is targeted to three key areas:

- More effective engagement on operational and underwriting topics;
- Improved reflection of the risk appetite; and/or
- Risk bearing capacity in the Business Strategy context.

Risk analytics often take a historical or point in time view of the business. As a result, there is the possibility that risk managers may come across as "backward-looking" in their interaction with the business, particularly those entities that are experiencing strong commercial changes. This is not intended to discount the importance of risk control, ongoing monitoring of current exposures, and other core activities carried out by risk functions. Significant and important work is being done to reduce risks associated with existing liabilities. At the same time, there is a pronounced expectation by interviewees for risk functions to devote a greater proportion of their time to forward-looking questions, such as distribution channel strategy, interdependencies between lines of business, the understanding of price developments, or changes in the competitive landscape.

Many firms aspire to establish a clearer connection between Business and Risk Strategy. Risk functions can make progress in this area by creating practical connections between their internal processes and broader business activities. Some examples of such links could be:

- Exposure analysis on risk concentrations that are reported to an underwriting committee;
- Determination of a risk based pricing methodology; and
- Informing the planning process on the reasonableness of future performance expectations.

It should be expected that frequent interaction between the CRO and CU/PO enhances mutual understanding of issues and priorities. A Risk Strategy developed with the benefit of such insight is more likely to gain senior management's acceptance.

Overall, risk functions have progressed significantly over the recent years. What were initially technical teams, emerging from actuarial units, are becoming units with a stronger business focus.

4.3 How does the Chief Risk Officer Improve Risk Awareness

As stated earlier, an insurance organization needs "risk people with a business mind and business people with a risk mind". An important area for future research is how a company achieves this and the roles of the CRO and CU/PO in those efforts.

Earlier in this paper respondents provided information about how communication and training on risk issues are currently shared. However, further research is necessary regarding how to imbue an organization with an ERM culture, potentially focusing on various tools that have been used to effect change in corporate culture. Some areas for research include:

- Enhanced communication tools;
- Changes in processes and procedures;
- Ideal organizational structures;
- Improved compensation schemes;
- Development of risk based tariff structures; and
- Cross training and rotational programs between Risk and other groups.

As a best practice, all aspects of a company's operations need to be reviewed for consistency with risk awareness and alignment with a strong ERM culture.

5 Key Best Practices

"Very effective, as demonstrated by the steady profit stream delivered in recent years."

Ideally, every company would share this respondent's sentiment regarding the CRO and CU/PO relationship and its effectiveness in managing risk and impacting business. As shown by the survey responses, many do. Overwhelmingly, this relationship is viewed as essential and beneficial to developing oversight and understanding of risk within Life and P&C companies. This isn't to say it's without challenges, but the aim isn't to have everyone agree. It is to have, as one company stated, "natural, healthy tension…needed for these functions to perform appropriately" to bring a company to a profitable state while keeping an eye on risks that could detract from profitability. For these roles to work best, they must communicate freely without concern of consequence nor blame for errors or impacts of prior decisions. When the CRO and CU/PO rapport is open and both are focused on company performance to (or exceeding) plan while maintaining a healthy risk profile, their functions and the company benefit from each capitalizing on the other's expertise to affect workable checks and balances. As overseer of the business area which takes on the bulk of an insurance company's risks, the CU/PO has begun to consult the CRO regularly on a variety of business processes just as the CRO approaches the CU/PO regarding application of risk appetite to business development.

Specific to the key areas of the ERM function, best practices identified regarding the relationship between the CRO and CU/PO include the aspects described below.

- Formal Relationships
  - Written reports should help the organization understand and respond to risk issues quickly and effectively. In particular, the CU/PO and team need to be able to understand and act on written communication from the risk function.
  - Monitoring needs to be complete enough that problems are not missed and simple enough that results can be digested. Teams which monitor risks need to identify issues that are material and actionable. Preferably, the CRO and the CU/PO work together to develop appropriate monitoring tools.
  - Committee structure is unique to each organization. At a minimum, the CU\PO should participate in the Risk Committee (or equivalent) and the CRO in the Underwriting Committee (or equivalent).
  - Risk appetite setting and monitoring form an important foundation for risk management and are typically developed through collaboration between the CRO and CUO.
  - Sign-offs and approval processes need to be designed to ensure that the risk appetite and limits are adhered to and the organization is protected, while avoiding stifling bureaucracy. A good, informal relationship and early communication between the CRO and CU/PO results in more effective sign-off and approval procedures.
  - Many referrals and escalations are avoided by a strong relationship and early communication between the CRO and CU/PO. However, under no circumstances should a CRO avoid referral or escalation to preserve a relationship at the expense of putting the organization at risk.
- Informal Interaction
  - Informal interaction, particularly between the CRO and CU/PO, is the lubricant that makes the formal interactions more effective.

  - Ideally these key officers and the members of their teams need to communicate regularly. While weekly communication is common, there is a need for communication (oral, written) more often to build the relationship necessary to support an effective ERM program.
- Roles and Responsibilities
  - The CRO needs to maintain enough independence to protect the organization by challenging business activities he or she deems potentially damaging. Independence does not mean that the CRO cannot maintain strong relationships with the CU/PO and other key executives.
  - While primary ownership of risk belongs to the Board and is delegated to the management of the company, ultimately, "everyone owns risk". The CRO and CU/PO relationship must be strong and visible in order to model this concept and the role that Enterprise Risk Management plays in an insurance organization.
  - It is most efficient for the CU/PO to involve the CRO early in the product development process, thereby preventing an 11th hour rejection when the CRO exercises his or her right to veto, and forcing the process back to square one.
  - Reinsurance decisions are often driven by the CU/PO rather than the CRO. However, the CRO is in the unique position of being able to provide information to optimize the reinsurance decision. The CRO should use this unique position to support the CU/PO and enhance their relationship.
  - Sometimes bad things happen. When they do, events need to be evaluated (often with a root cause analysis) to determine the necessary changes to prevent a recurrence. For these evaluations to happen effectively, employees need to ask tough questions without the fear of repercussions. It is especially important that the CRO and the CU/PO, the main risk taker in the organization, work collaboratively in these situations.
  - Development of a strong risk culture is an essential part of an ERM program and is much easier to achieve if the CRO and the CU/PO can present a united position. These two important corporate officers can set a tone to be emulated throughout the organization.
- Overall
  - A good relationship between these two key executives is a necessary element to ensure an excellent ERM process and culture.
  - "Risk people need a business mind and business people need a risk mind". Better risk and business decisions are a result of the CRO and CU/PO working together, sharing and rotating staff amongst the two teams, and involving each other early on in the decision making process.

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