

# Moving to the next level – a progress report on insurance risk leadership

2008 Insurance Risk Leadership Survey




## To our readers:

This 2008 Insurance Risk Leadership Survey and report presents the progress made and the challenges ahead for insurance companies in building strong risk management practices.

We would like to thank the members of our survey advisory panel, the participants in the survey and the guests who attended a recent roundtable discussion at which we presented the preliminary survey results. These senior risk management executives have demonstrated a personal commitment to and deep professional interest in moving to a new era of enterprise risk management and risk leadership.

We are delighted to make this report of the survey findings available to Ernst & Young clients and our colleagues and friends in the insurance industry. We welcome the opportunity to discuss with you the survey findings and the issues they highlight. We hope you will participate in future surveys and discussions of critical risk management issues.



---

**Douglas A. French**

Managing Principal – Insurance and Actuarial Advisory Services



---

**J. Chris Karow**

Partner – Financial Services





# Contents

Executive overview .....	1
Survey approaches, participants and themes.....	3
I. Introduction .....	5
II. Risk organization and risk governance .....	7
III. Risk measurement, aggregation, reporting and monitoring.....	25
IV. Strategic management and decision-making.....	37
V. Conclusion .....	43
Survey advisory panel, survey participants, Ernst & Young survey project leadership.....	45





## Executive overview

Insurance companies have invested significant resources and management time in strengthening their risk governance, management, measurement and monitoring capabilities. In an environment of volatility and demand for greater transparency and stronger financial performance, risk management has become a critical priority and a basis for competitive differentiation.

Ernst & Young's 2008 Insurance Risk Leadership Survey, our third such survey in five years, shows that insurance companies are making progress – some of it remarkable – in risk management. The survey also points to gaps and impediments that companies still face on their journey to a higher level of risk management.

**The era of enterprise risk management is here.** Enterprise risk management (ERM) policy frameworks are designed to be comprehensive in identifying the key elements of an organization's ERM activities. In contrast to earlier surveys, all participating companies responding to our questions about ERM say they either have (68%), are developing (23%) or are planning to develop (9%) ERM policies.

The survey shows that ERM policies are works in progress, rather than fully integrated elements of company operations. As expected, most companies have adopted formal ERM mission statements, principles, risk categories, risk management processes and ownership structures. On the other hand, the more dynamic aspects of ERM are still to be addressed – such aspects as risk aggregation, risk tolerances and limits and the identification and management of emerging risks.

**Risk management organizational roles are evolving and maturing.** At many companies, risk ownership, management and monitoring roles are not always distinct and separate responsibilities. Ownership of specific risks is often diffused across corporate functions and business units. Individuals with responsibility for ownership of key risks are often responsible for overseeing or monitoring the same risks. This creates potential for conflict and the weakening of objective oversight and governance of risk. Chief risk officers (CROs) monitor some, but not all risks and even own various risks – such as reinsurance and non-reinsurance credit risk – while having no formal responsibility for other risks. In the future, CROs believe they will expand their risk monitoring role. Because monitoring of all significant risks is the foundation of an effective risk function, it is difficult to see how CROs will achieve their risk management objectives without taking on this expanded role.

Organizational reporting lines and governance of CROs and business unit risk management staff will likely require strengthening as the risk function matures. It will be necessary to eliminate incompatible roles, clarify ownership and adopt clear-cut monitoring responsibilities to ensure independent oversight of key risks.

**Formal risk appetite statements and the integration of risk tolerances and limits have been adopted more broadly as part of risk management governance frameworks.** While risk appetite statements were non-existent two or three years ago, 63% of companies surveyed say they have adopted risk appetite statements, and the remainder are in the process of doing so. While much progress has been made in developing these initial risk appetite statements, survey participants say there is still more work to do in adopting more sophisticated and useful statements that can be used to guide risk-taking.

A majority of companies (90%) also have in place formal risk tolerances and limits. However, the survey results suggest companies need to work on establishing meaningful linkages between risk appetite and tolerances. In practice, existing linkages are notional and high level rather than direct and rigorously defined and enforced. Most companies leverage their established infrastructure and practices to manage key business risks, such as interest rate, equity and credit risks. The greater challenge lies in managing operational risks, where linkages are still limited and measurement and monitoring are still high level and less rigorous than for other risk areas.

The reporting of tolerances and limits to the C-suite, corporate ERM committee and board is becoming more disciplined and consistent – with quarterly reporting being predominant. While this is an improvement from the results reported in our earlier surveys, there is room for progress in this area to bring insurance companies on par with other financial services companies.

Risk aggregation is becoming a critical element in enterprise risk measurement and management. Aggregation of financial risks is progressing although companies cite impediments to their aggregation efforts – particularly data availability, lack of appropriate aggregation methodologies and system constraints in modeling. These impediments diminish the timeliness, completeness and effective use of risk aggregation information. Respondents say there are still no common aggregation measures or methodologies in place although they expect to advance in these areas during the next three to five years. The aggregation of risk across all risk elements, products and business units will allow the industry to assess and manage enterprise risk-taking activities and ultimately enhance the risk-reward decision process.

**Economic capital (EC) has taken hold and its use is being expanded, despite organizational and technological challenges.** Most companies indicate they either have implemented EC (45%) or are developing EC (45%). EC is evolving as a business tool that has rich practical uses today – communicating exposures, setting tolerances and limits, managing tail exposure and making strategic decisions. Over time, survey respondents say EC will be critical in capital management and risk-adjusted performance measurement.

**CROs have a seat at the management table.** While it is problematic whether risk leadership has a meaningful seat at the management table, 81% of CRO participants say they currently have influence in product design and pricing and investment strategy decisions. However, they say they have less influence in strategic planning and mergers and acquisitions, and much of their influence is implicit rather than a result of any formal explicit authority. They believe that, during the next few years, they will have considerably more influence in financial planning and strategy and in strategic planning. CROs also believe their companies will adopt risk-versus-reward decision-making processes and risk-based performance measurement systems.

**Are we ready for the future?** Substantial progress is evident, and most organizations have ambitious plans for expanding the breadth and use of risk management information. However, significant hurdles remain. To achieve many of the key risk management objectives identified in the survey, it will be necessary to strengthen risk management staff, processes, systems and methodologies. This includes defining better the role of the CRO and the roles of other risk constituents; increasing the risk organization's focus and capabilities to enable buy-in, education and cultural change; establishing new performance measures and improving risk management tools and systems. While the industry is setting high goals and CRO participants appear confident that ample progress will be made, many of the challenges ahead will require a level of effort, skills, funding and corporate support that goes beyond the current level of commitment observable from the survey responses.

**Lessons learned – or to be learned.** Finally, it is interesting to note that the CROs and other risk executives at our roundtable often referred to the unfolding crisis in the mortgage and financial markets as they discussed the insurance risk management issues addressed in the survey. The thinking was that many of the challenges and solutions in both areas are strikingly similar.

It was clear that roundtable participants felt the ongoing crisis reemphasizes the imperative that all financial services companies need to establish and operate within a well-structured risk appetite. Aggregate exposures across the organization must be understood and managed actively and holistically. Enabling the risk organization to provide an effective counterbalance to revenue pressures that can lead to unhealthy concentrations of risk requires discipline and strong governance around risk ownership, management and monitoring. It also requires risk-adjusted performance measures that counterbalance the temptation to emphasize yield.



## Survey approaches, participants and themes

The underlying premise of the 2008 Insurance Risk Leadership Survey is that CROs are moving forward, despite obstacles, in forming a vision of the future of risk management. Our survey was designed to understand that vision, what has been achieved thus far and what lies ahead.

The survey targeted the CROs of the top 50 life/health and property/casualty insurers and reinsurers in North America. Participants included both North American (US, Bermuda and Canada) companies and the North American operations of international insurance companies.

Our survey was designed in consultation with an advisory panel of six CROs of major insurance companies who provided insight on needs and interests from a CRO's perspective. The advisory board members and participating companies are listed on page 45.

The survey was conducted in late fourth quarter 2007 and early first quarter 2008. In late February 2008, we were pleased to host an Ernst & Young insurance industry roundtable at which we presented the preliminary survey findings to survey participants and other industry executives. Our report reflects both the survey findings and the insights and perspectives of the roundtable participants. In accordance with our promise to survey participants and roundtable attendees, all responses and remarks are presented with complete anonymity.

The survey and this report focus on three key areas of insurance risk management, which, we believe, are the most critical in companies' efforts to achieve improvement. We asked participants detailed questions about:

- ▶ **Risk organization and governance:** how does the risk organization look today versus how it will look three years from now? What is the governance framework today? What critical elements in the framework are missing and what changes are expected?
- ▶ **Risk measurement, aggregation, monitoring and reporting:** what risks are being measured today, and what is the level of precision relative to where it is ultimately expected to be in the future? How is risk aggregation handled today and how will it be handled in the future? What impediments do companies face in implementing full-scale risk aggregation? What tolerances and limits have been established, what monitoring and reporting practices and processes are currently in place and what improvements and additional practices are needed?
- ▶ **Strategic decision-making:** how strong is the linkage between risk management and strategic decision-making today? How will risk management become more integrated into decision-making to help organizations improve value?





# I. Introduction

While insurance organizations have been effective in managing risks within business units, few insurance organizations are characterized as having excellent enterprise-wide risk management practices. Today, a majority of companies are moving to the next level to establish more robust risk management frameworks that include a broader range of risks, utilize more sophisticated methodologies and provide more transparency internally and externally.

Most chief executive officers (CEOs) and chief financial officers (CFOs) are likely to agree that strengthening risk management can lead to a competitive advantage for their companies and, therefore, contribute to value creation. The journey forward is worthwhile and necessary – but there is a long distance to cover, and obstacles along the way. There are no definitive standards or leading practices for risk management frameworks. In addition, the extent and nature of the culture change required for permanent, effective risk management are still to be explored.

For that reason, CROs are developing their own vision of risk management for their organizations. However, they are finding the journey to achieving that vision is slower and more challenging than anticipated. While leading risk management practices are starting to emerge, most are not yet sufficiently developed and tested to serve as a model.

Today, virtually all major insurance companies and most of the smaller ones have CROs. Furthermore, there are significant efforts underway to develop, implement and fine-tune more comprehensive risk management measures at all levels – from board approval of risk policies to development of business unit-level operational risk guidelines and measurements.

The journey to a new era of insurance enterprise risk management is well on its way. But it will be important to sustain the same sense of purpose and urgency that the industry demonstrated a few years ago. Although rating agencies have completed their initial scoring process, and most companies have reached a level of adequacy, companies will still need to be vigilant and committed to moving their risk management processes forward.





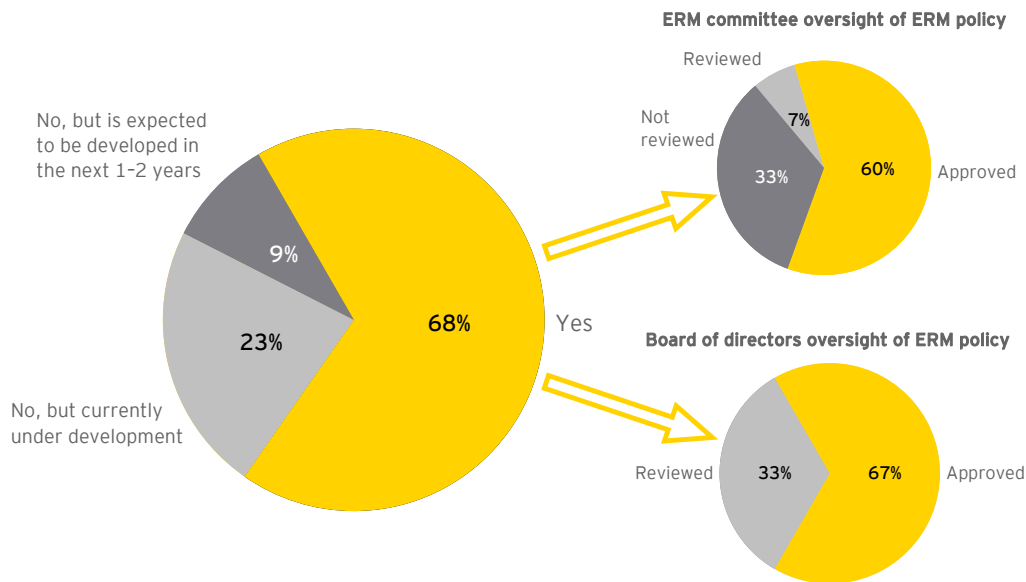
## II. Risk organization and risk governance

### Enterprise risk management policies

Insurance companies are going through a maturity curve in terms of developing a robust enterprise approach to risk management. A number of forces are driving them in this direction – from the expectations of rating agencies and industry analysts to the eventual new regulations governing risk management practices (e.g., Solvency II) to the growing belief that risk management can be a competitive advantage and help create shareholder value. A key indicator of whether a company has defined the main objectives, activities and governance to support an ERM framework is the existence of a corporate-wide ERM policy.

Companies are making significant progress in establishing formal ERM policies. In our survey, 68% of the respondents have ERM policies in place (Figure 1); 67% of these have had their policies approved by their boards of directors or a board committee; and 60% have had them approved by the corporate ERM committee. The remaining companies are working on their policies. The survey results suggest that life companies are less likely than property/casualty companies to get their ERM policies formally approved by their boards.

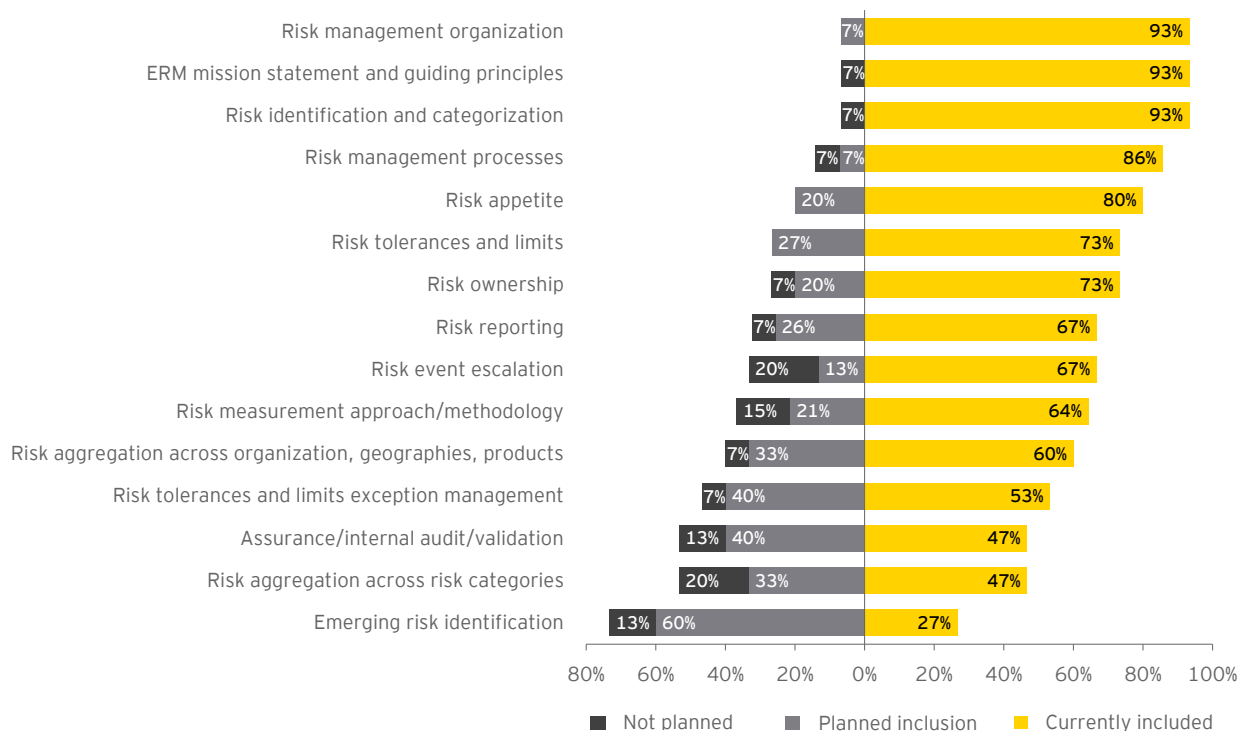
**Figure 1. Existence of corporate-wide ERM policy**



**Enterprise risk management policy:** a formal document that covers all risks across the enterprise. There can be multiple enterprise-level policy documents, but they would need to be linked by an overall policy document.

Companies' ERM policies contain the basic elements required for an effective ERM governance framework: an ERM mission statement and guiding principles, risk identification and categorization, a description of the risk management organization, the articulation of risk ownership and risk management processes (Figure 2). A majority of companies say they have also addressed issues of risk reporting, risk appetite, risk tolerances and limits and risk event escalation.

**Figure 2. Elements included in ERM policy**



Conversely, the survey results also suggest that companies have significant work remaining in risk aggregation across risk categories, exception management for risk tolerances and limits, assurance and internal audit validation and identification of emerging risks. Detailed survey results indicate that most companies are planning to address these gaps during the next year.

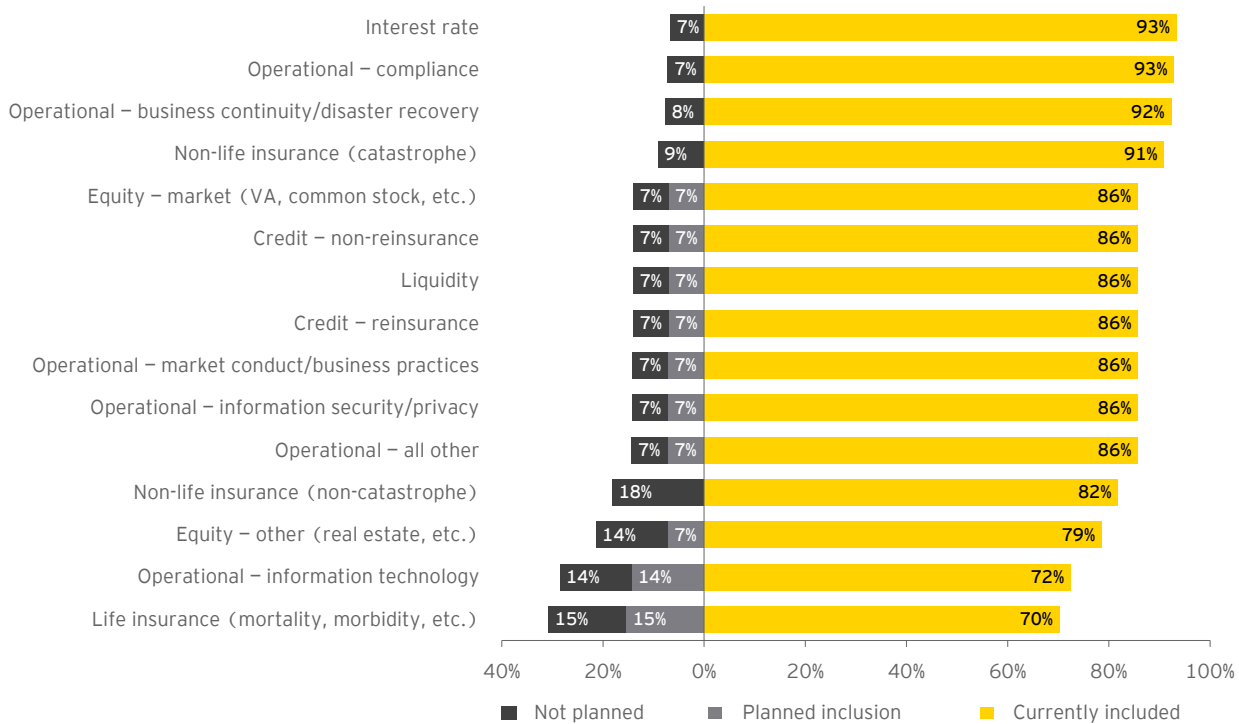
Overall, companies have developed or are developing ERM policies that cover a comprehensive range of risks (Figure 3).

Among the most mature areas of enterprise-wide risk policy are key operational risks, such as business continuity, market conduct/business practices and information security, as well as equity, credit, life and non-life risks. The survey also finds that many companies have developed business unit-level policies to cover the entire range of risks.

On the other hand, traditional insurance risks (life and property and casualty) have not been addressed to the same degree as other risks although they are often addressed in separate underwriting standards on a product-by-product basis.



**Figure 3. Risks covered in ERM policy**



ERM policies are works in progress. While most companies have comprehensive ERM policies, virtually all survey participants say there are still key policy areas that need to be developed or strengthened. For example, some policies do not set forth a disciplined process for reliable identification of emerging risks, and about half lack detail on proper management of breaches of limits or tolerances and on aggregation of risk across risk categories.

We believe that one factor responsible for the relative immaturity of insurance company risk management is the traditionally lower levels of regulatory oversight in the insurance industry relative to other financial services sectors such as banking. In our view, European insurance companies tend to have more mature and consistent risk governance practices than US insurance companies, due in part to stronger regulatory oversight.

## Risk organization and ownership

Insurance companies have worked to delineate risk ownership more clearly across their organizations. Risk ownership, as well as risk management and risk monitoring responsibilities, are documented in companies' ERM policies. However, at many companies, specific responsibility for the ownership, management and monitoring of specific risks is unclear and is diffused across functions and organizations. Many companies still have functional and business unit risk silos.

Risks tend to be owned by a traditional functional area – interest rate, equity and credit risks are owned by the chief investment officer (CIO); liquidity risk is owned by the CIO and treasurer, and operational risks are owned by the chief technology (CTO) and chief compliance officers (CCO). The business units themselves show a relatively low level of overall risk ownership: only product-specific risks (e.g., life insurance risks and operational risk in the form of business practices) show high levels of business unit ownership.

The survey shows that diffusion of risk ownership is a significant issue (Figure 4). Detailed survey responses indicated that as many as six executives share ownership of certain risk areas – including the CRO, CFO, CIO, chief actuary, CCO and business unit heads. Diffused risk ownership may result in unclear responsibility and accountability for risk strategy and appetite. It also raises questions about the fundamental underpinnings of risk governance at insurance companies.

**Risk ownership:** risk ownership means that the primary owner can sponsor changes to risk policy strategy and tolerances and limits subject to management committee (ERM or similar committee) approval.

**Risk management:** risk management means that the manager executes the risk management process consistent with the guidelines and directives of the risk owner.

**Risk monitoring:** risk monitoring is the process of monitoring the risk positions of the organization and ensuring the positions are in compliance with stated policies, tolerances and limits.

**Figure 4. Companies with multiple owners of risks**

	2 owners	3 owners	>3 owners
Interest rate	5%	0%	25%
Equity – market	0%	5%	21%
Equity – other	6%	0%	22%
Credit – non-reinsurance	5%	0%	20%
Credit – reinsurance	5%	0%	21%
Life insurance risk	6%	0%	18%
Non-life insurance – non-catastrophe	9%	0%	18%
Non-life insurance – catastrophe	10%	0%	30%
Liquidity	0%	5%	14%
Operational	16%	5%	13%

Another significant finding (Figure 5) is the common trend of many management members, including the CRO, CFO and chief actuary, to hold multiple roles in the ownership, management and monitoring of risk.

Approximately 90% of companies have executives with responsibility for multiple, potentially incompatible, roles (i.e., owning and monitoring risk, managing and monitoring risk or owning, managing and monitoring risk). In many instances, the CFO or CIO is the owner of certain risks as well as simultaneously being responsible for the management and monitoring of those same risks. This is evident most often in interest rate, equity and credit risks, and it presents potential for conflict of interest and violation of governance standards.

“It is shocking to me that there are CROs today who do not monitor all of their companies’ risks. If they don’t monitor the risks, what do they do? They need to set agendas and develop policy – but they also need to monitor risks.”

*Roundtable participant*



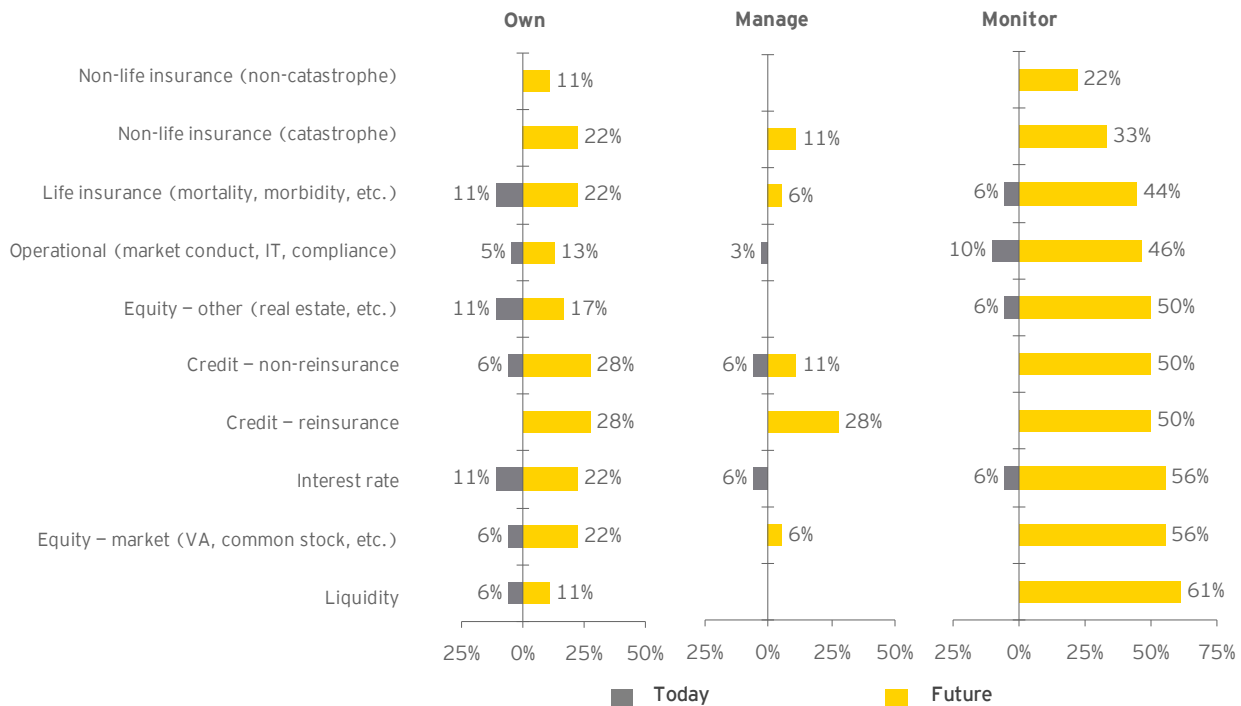
**Figure 5. Instances of multiple responsibility for risk monitoring, management and ownership**

	Interest rate	Equity (market)	Equity (other)	Credit (non-reinsurance)	Credit (reinsurance)	Compliance - Operational
Manage and monitor	29%	45%	20%	10%	16%	10%
Own and monitor	29%	30%	25%	35%	32%	33%
Own, manage and monitor	19%	20%	25%	30%	32%	24%

Given the diffusion of roles and responsibilities in managing risks, it is not surprising that the survey indicates the CRO is not responsible for monitoring many key financial and non-financial risks (Figure 6). As the common role of a CRO is to oversee risk-taking, this is a troubling situation that could signal a potential gap in the establishment of CRO responsibilities.

The survey suggests that the trend is toward greater centralization of risk monitoring under the CRO, although future plans still only contemplate incremental expansion of the CRO role. However, roundtable participants also recognize it might make more sense for certain risks to remain outside the CRO’s direct oversight – including compliance, legal and certain information technology risks.

**Figure 6. CRO risk responsibilities\***



\* For each risk type, the sum of own, manage and monitor may be greater than 100% because some CROs have multiple responsibilities.

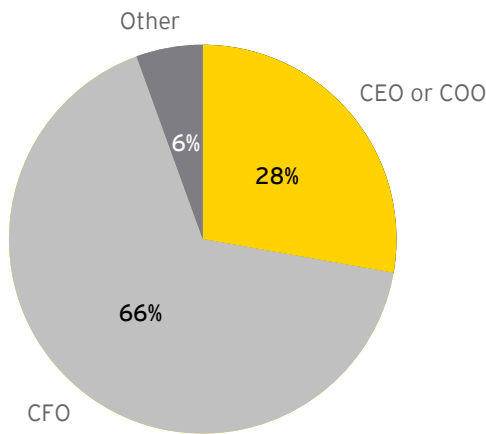
“Who the CRO reports to depends on the relationship the CRO has with the board and executive management. If the CRO doesn’t have a seat at the table, there is a potential conflict in reporting to the CFO because the CFO is focused on short-term financial results. There needs to be balance – it is a very delicate issue.”

*Roundtable participant*

In 66% of the organizations surveyed (Figure 7), the CRO reports directly to the CFO; the remainder report to the CEO or COO. This contrasts with many European insurance companies in which the CRO reports directly to the CEO. Survey responses indicate that, in some cases, the CRO reports to the CEO on a dotted-line basis.

The positions that report to the CRO vary by organization, with the exception of business unit CROs, who almost always have a dotted-line (or, less commonly, a solid-line) reporting relationship to the corporate CRO.

**Figure 7. CRO reporting relationship**



“A CRO can’t have credibility with a business unit head if he or she is viewed as an outsider and interloper. Once credibility is established, the reporting relationship can be switched because that CRO is now seen as a member of the business unit team.”

*Roundtable participant*

“As far as governance is concerned, we are still in the third or fourth inning. We need to live through some ‘stress events’—like interest rates in the early 1980s and what we’re starting to experience today—to see where we really are.”

*Roundtable participant*

In spite of much effort during the past few years, the survey responses indicate that many organizations have a way to go to achieve the progress they seek in risk organization and governance practices. There is a lack of clarity about the respective roles of corporate and business unit leadership in risk ownership, management and monitoring. Confusion about specific ownership, management and monitoring responsibilities invites ineffective or inconsistent risk management across the enterprise.

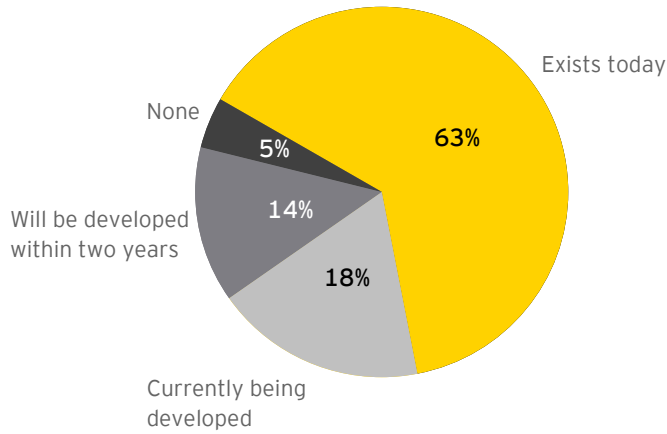
While total centralization of risk monitoring may not be necessary, it is critical that risk-monitoring activities be well integrated and coordinated to avoid overlap, gaps, inefficiencies and confusion.

## Risk appetite

Today, more than half (63%) of companies surveyed say they have a formal risk appetite statement (Figure 8), and almost all of those that do not are in the process of developing one. In comparing these responses with those in our previous surveys, we note a major advance in the past three years, which is likely a result of the emphasis rating agencies have placed on formal risk appetite statements.

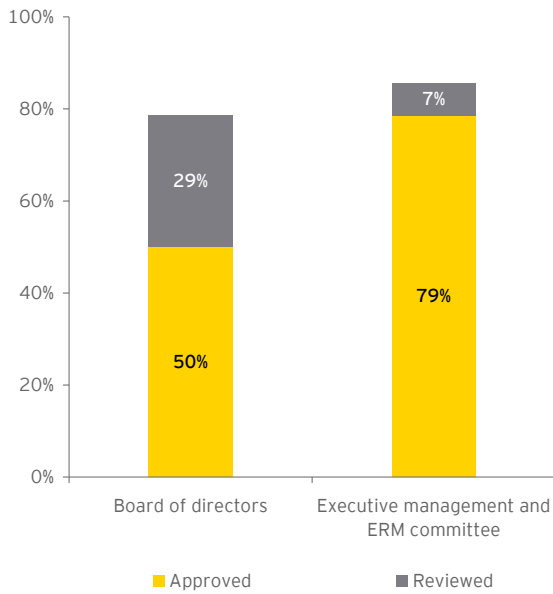


**Figure 8. Status of corporate-wide risk appetite statements**



Of the companies with corporate risk appetite statements, survey responses show that 79% say their statements have been approved by executive management (including the ERM committee); 79% had some level of board involvement, 50% of which had formal board approval of their risk appetite statement (Figure 9). This is a significant increase from past practices and may be evidence of more strategic discussions of risk at the board level.

**Figure 9. Executive management and board of directors review of risk appetite statements**



Companies' risk appetite statements vary widely. (See Appendix A for a complete list of risk appetite statements provided by survey participants.) The statements provided by survey participants fall into five main categories of emphasis:

- ▶ Capital exposure
- ▶ Rating agency requirements
- ▶ Earnings or earnings volatility
- ▶ Value at risk
- ▶ Liquidity

A review of the detailed risk appetite statements suggests that many of the statements are not actionable or easily related to actual risk levels in the business. Many represent goals (Figure 10) more than an articulation of specific acceptable levels of risk.

**Figure 10. Representative risk appetite goals**

Rating agency	Maintain rating agency capital
	Maintain ratings at current level
Earnings related	ROE in excess of X% and increasing by Y% per year
	EaR no higher than X% of 12-month planned earnings
	Be able to earn way out of shortfall in an X-year time frame
Capital exposure	Capital at risk not to exceed X% of available financial resources over Y-year horizon at Z% probability
	Hold sufficient capital to meet all regulatory capital requirements
Earnings volatility	GAAP or IFRS earnings volatility not to exceed X% over Y-year horizon at Z% probability
	GAAP net income will be within X% of target Y% of time

**Risk appetite:** a risk appetite statement defines the level of risk the enterprise is willing to accept.

Risk appetite is maturing but perhaps at a slower rate than ERM. Many current risk statements are very high-level and, consequently, not easily and directly linked to business, strategy or risk decision-making activities. But as we have seen in the recent credit crisis, a clear articulation of the specific level of risk that is or is not acceptable is critical in effective risk management.

## Rigor of measurement in establishing risk appetite

The level of analysis used by survey participants in developing risk appetite varies by risk type. Some measurements of risk appetite are more mature and rigorously applied – particularly interest rate, equity and credit risks, in contrast to operational risks (Figure 11).

Interest rate risk is usually supported by rigorous analysis, operational risk by higher-level analysis and reinsurance risk by moderately rigorous analysis.

Given the recent experience of many companies and the credit market turmoil, it is interesting that almost 50% of participants have a less-than-rigorous process for measurement of credit risk.

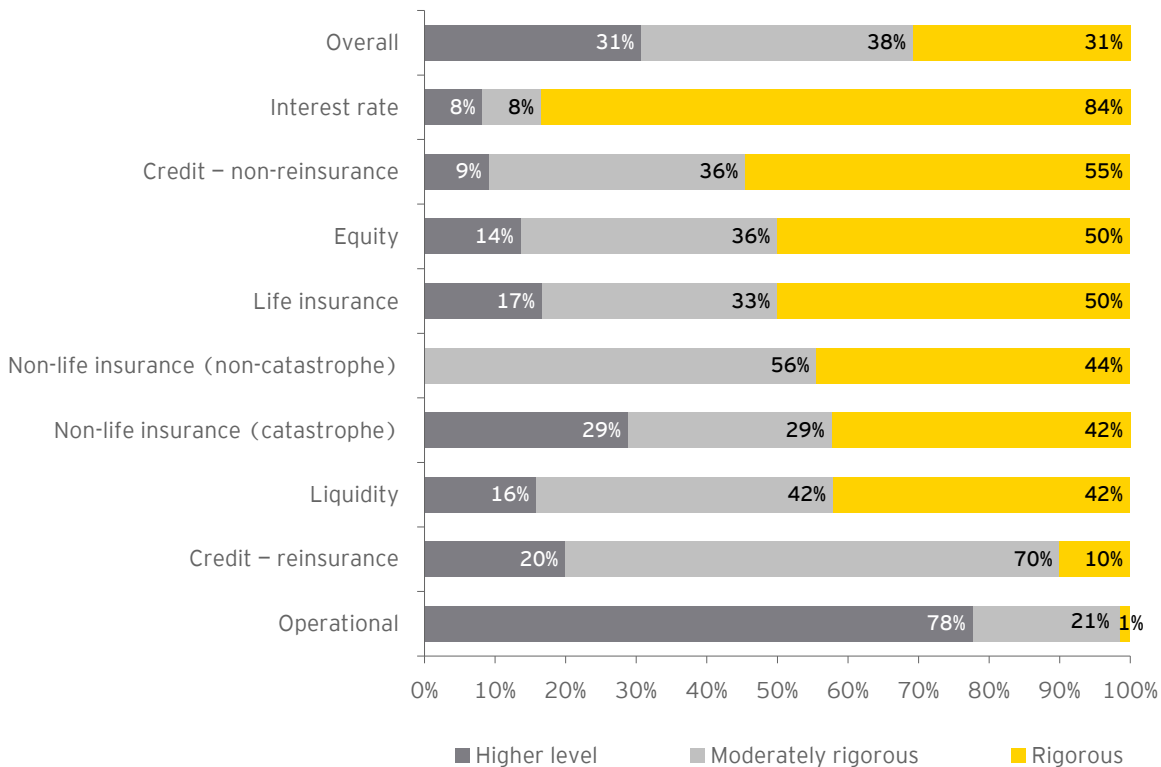


**Rigorous:** sophisticated financial models are used to measure the exposure of the most significant risk elements and events and to establish an overall appetite. A wide range of events is evaluated to provide management with sufficient data to establish appetite statements with confidence.

**Moderately rigorous:** financial models are used to quantify the impact of the most significant risk elements and events; however, the models are only sophisticated enough to provide a general level/range of impact and/or not enough events are measured to establish a high level of confidence in the risk appetite statements.

**Higher level:** the risk appetite statements are based on limited, if any, financial modeling.

**Figure 11. Rigor of measurement in risk appetite statement development**

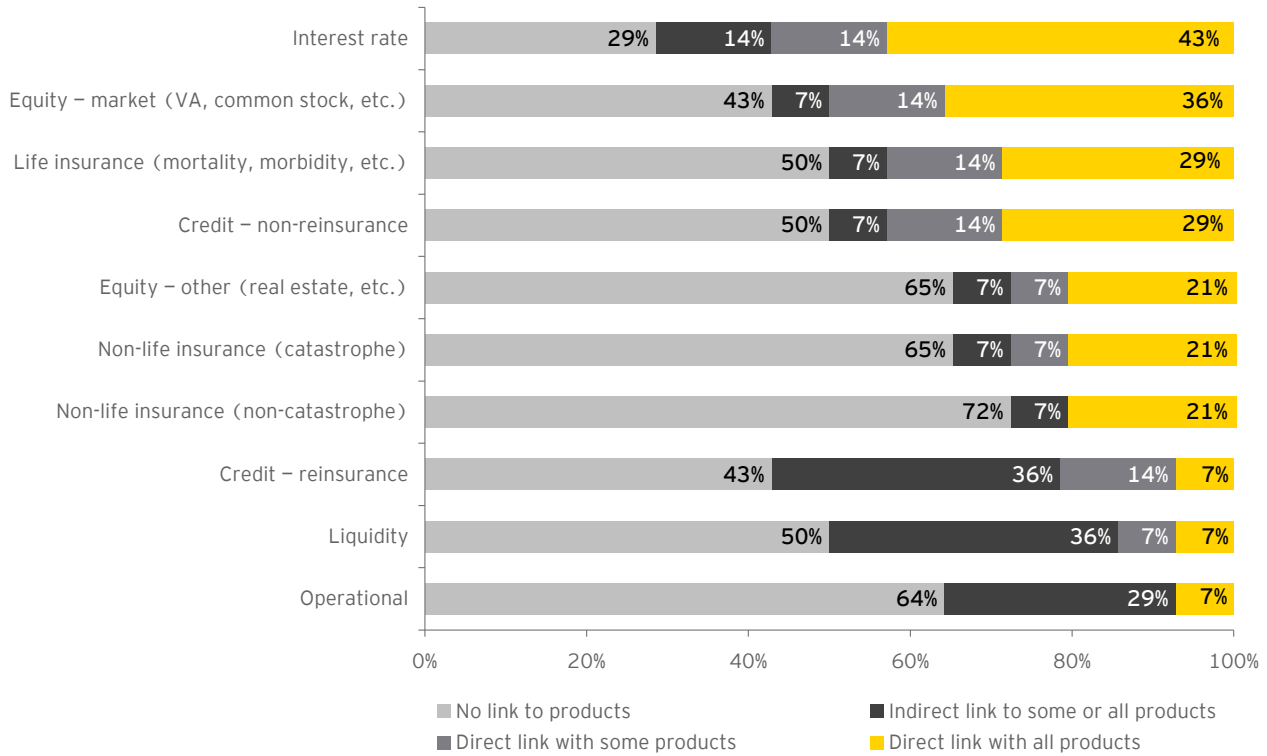


## Linkages between risk appetite and risk tolerances

There is a striking divergence among respondents on the issue of direct and indirect linkages between risk appetite and risk tolerances and limits. This is an area that is still evolving. Almost half of the larger companies say they have established direct links (Figure 12). However, in practice, it appears that most linkages are still notional, rather than direct and rigorously established.

Companies are finding that tolerances and limits for many products are based on legacy, rather than fresh analysis, and that creating a link between risk appetite and limits is difficult. This is exacerbated by the fact that many risk appetite statements set forth goals, such as maintaining a credit rating, for which it would be impossible to create a direct link.

**Figure 12. Linkages between risk appetite and risk tolerances**



### Board of director focus on risk governance

From the survey responses and comments at the roundtable, it appears that insurance company boards are spending more time than ever on risk management issues – with particular emphasis on equity, operational and credit risk issues – and less emphasis on liquidity, ERM and risk appetite (Figure 13).

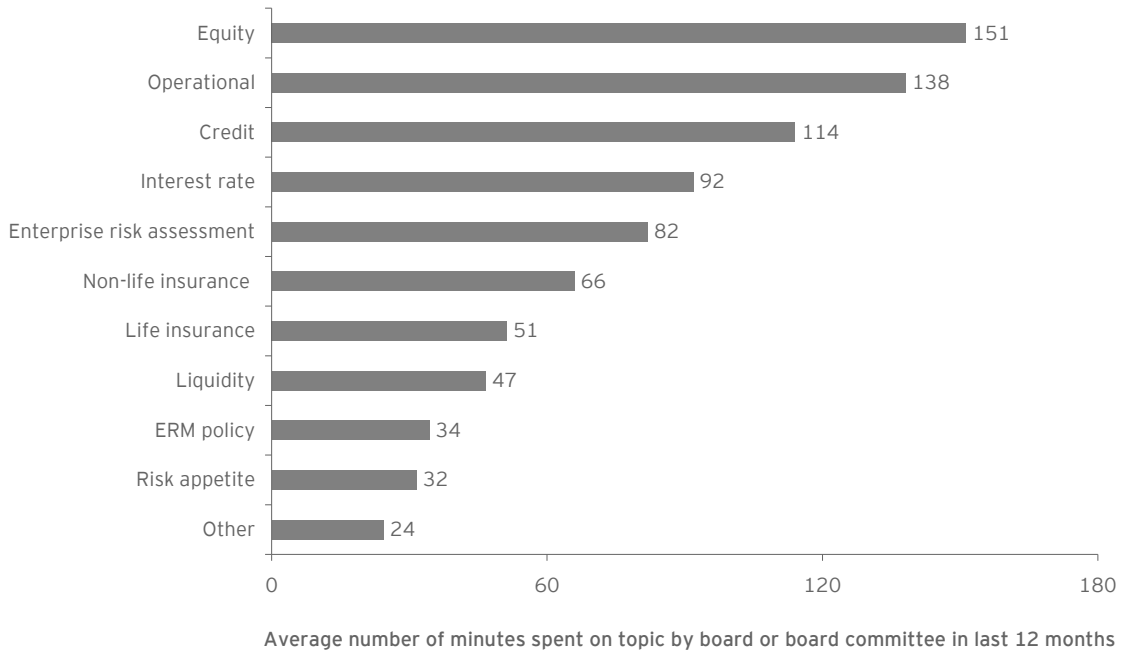
In our view and the views of roundtable participants, more problematic is the level of education and understanding board members may or may not have on those issues.

“What boards are spending time on today looks upside down to me. This response says that boards are spending less time on the very things that may come back to bite them sooner.”

*Roundtable participant*



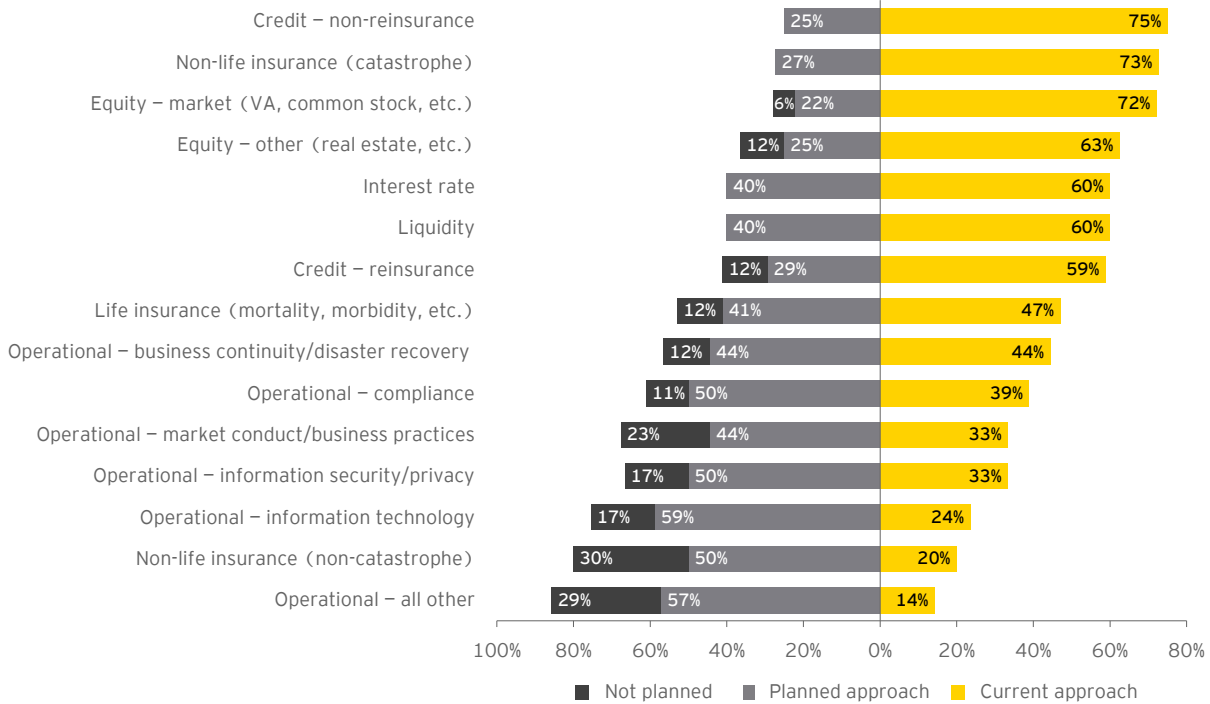
**Figure 13. Board of director focus on risk**



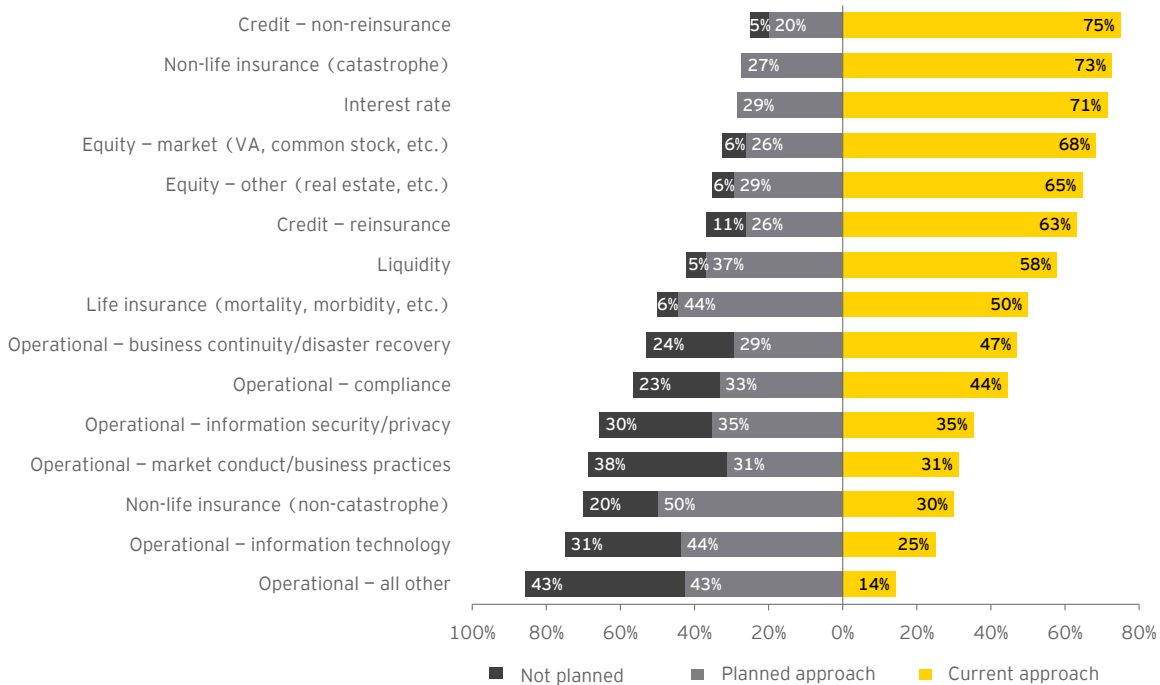
## Risk tolerances and limits

A majority of participants (90%) indicate they had formal tolerances and limits for at least one of the major risk classes (Figures 14 and 15). The risks for which formal tolerances and limits have most commonly been adopted are the major financial risks – credit (non-reinsurance and reinsurance), equity (market), interest rate and liquidity.

**Figure 14. Formal risk tolerances for entire organization**



**Figure 15. Formal risk limits for entire organization**





**Risk tolerance:** risk tolerance is the amount of risk for a specific risk type that the entire organization is willing to accept. Risk positions in excess of this amount are escalated and actions are taken to bring the exposure back under tolerance.

**Risk limit:** a risk limit is the amount of risk for a specific risk type that further delineates the overall risk tolerance. Risk positions in excess of this amount are escalated and action may be taken to bring the exposure back under limit, depending on the overall tolerance. Risk limits may apply at the business unit level as well.

Most companies indicate that they have yet to address the development of tolerances and limits for operational risks – compliance, information security and privacy, market conduct and business practices and information technology.

The survey shows that there is a wide range of metrics for tolerances and limits (Figure 16), and detailed responses indicate no consistency across risk types within each company or across survey participants. Frequently, tolerances and limits are defined in nominal terms and not measured in risk-sensitive metrics, or some blend of the two may be used. A number of participants are still using nominal measures of risk, such as the dollar amount of exposure, rather than risk-sensitive measures. However, a minority of companies are using risk-sensitive measures, such as EC and value-at-risk (VaR) for setting tolerances and limits.

The diversity of measures used to define tolerances and limits across risk types suggests that linkages between risk appetite and tolerances and limits are still weak. This may prevent companies from being able to measure, understand and control aggregate risk exposures. Building strong linkages requires a common measure across risks.

Tolerances and limits still do not exist for some key risks. Credit risks are covered by most companies, but many companies still do not have tolerances and limits for key operational risks. In our view, effective risk measurement must be aligned with risk governance – in particular, risk measurement must be explicitly linked with risk appetite and risk tolerances and limits.

**Figure 16. Metrics used to define tolerances and limits**

Interest rate	Equity	Credit	Life insurance	Liquidity
Duration	Greeks	Notional	Retention limits	Liquidity ratios
Value-at-risk	Earnings-at-risk	Earnings-at-risk	Actual-to-expected	Cash-flow projections
Convexity	Value-at-risk	Value-at-risk	Value-at-risk	Value-at-risk
Earnings-at-risk				

## Rigor in determining risk tolerances and limits

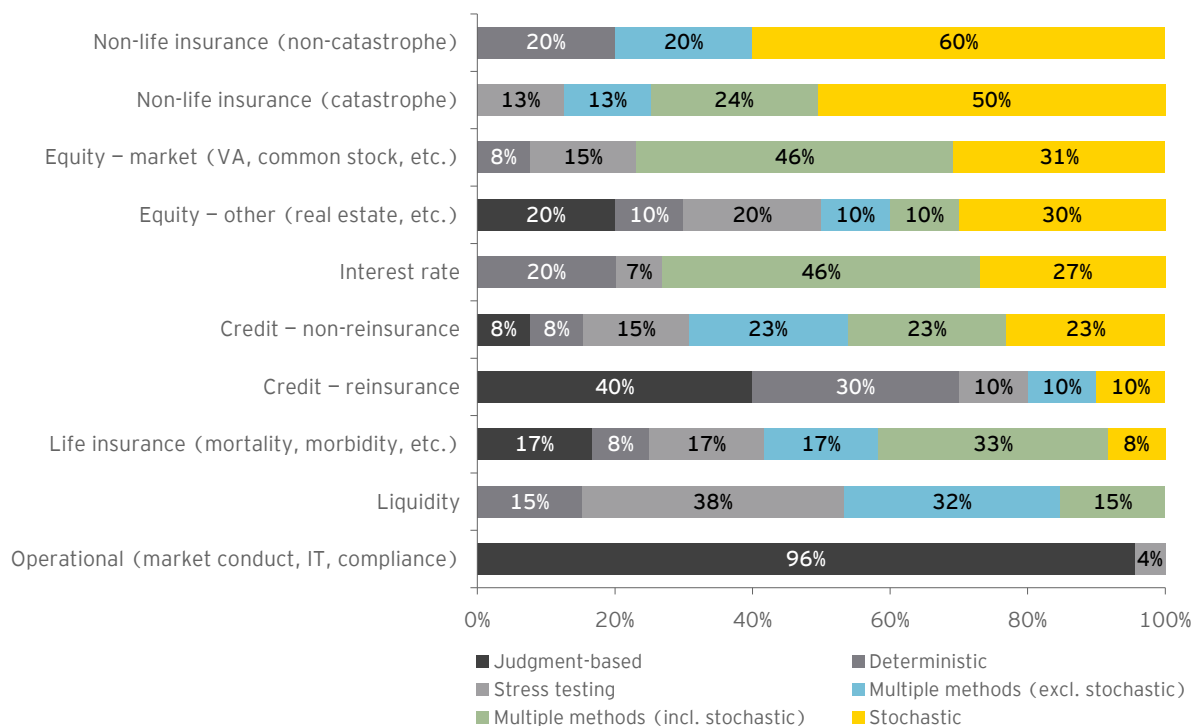
The analytic rigor used to establish tolerances and limits varies depending on both the risk being measured and the company. Most survey participants are leveraging existing infrastructure to establish tolerances and limits and are not yet developing a consistent approach and framework. Tolerances and limits based on stochastic, deterministic, judgment-based and stress-testing approaches are used to varying degrees for all risk classes, and the mix tends to be dependent on the type of risk being measured (see Figure 17).

A few risk types showed different patterns:

- ▶ Non-life insurance catastrophe and non-catastrophe risks are generally modeled stochastically.
- ▶ Consistent with the financial services market’s historical focus and greater sophistication in managing market risk, interest rate and equity tolerances and limits are primarily determined stochastically.

- ▶ Representing an area where there have been many advances in improving measurement methods but where much improvement can still be realized, companies use stochastic, stress-testing and deterministic approaches to varying degrees to set credit-risk tolerances and limits. Stochastic and stress-testing approaches are more common.
- ▶ Reflecting the difficulty in determining appropriate enterprise-wide measures, operational risk tolerances and limits are predominantly judgment-based.
- ▶ Reinsurer credit-risk tolerances and limits are judgment-based almost half of the time, presumably as a result of a lack of sophisticated analysis to date.
- ▶ Due to the emphasis on stress and tail events impacting liquidity, liquidity-risk limits and tolerances are heavily weighted toward deterministic modeling and stress testing.

**Figure 17. Rigor in determining risk tolerances and limits**



“We need to be more quantitative, but we also need to triangulate more and think through various scenarios. The numbers by themselves can mislead.”

*Roundtable participant*

Of the participants answering our questions about tolerances and limits, 58% have not had a tolerance or limit breach in any of the risk types identified within the last 12 months. Of those that have had breaches, all have had more than one breach (Figure 18).

Tolerances and limits that do exist are often based on judgment and historical levels that are increased annually regardless of the appropriateness of risk levels, rather than increased or decreased based on rigorous analysis of how much risk is appropriate to achieve financial goals or ensure the organization operates within its risk appetite.

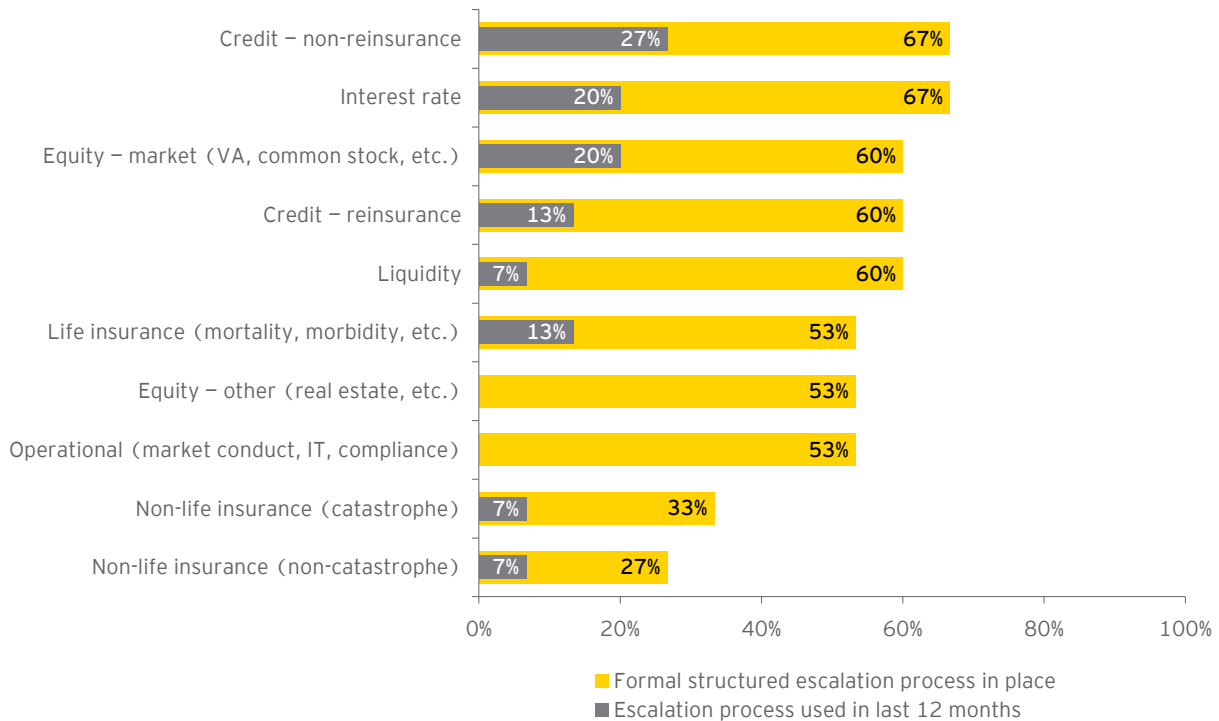


**Figure 18. Incidents of breaches of risk tolerances and limits**

Risk type	Tolerances breaches	Limits breaches
Interest rate	13%	19%
Equity	13%	13%
Credit	6%	19%
Life insurance	0%	6%
Catastrophe	13%	6%
Operational	6%	6%

Given the infrequency of tolerances or limits exceptions, it appears that, for some participants, tolerances and limits are often set too high to be effective tools in managing risk and the business, or that limits are simply increased whenever they are breached, making them ineffective. It is also troubling that one-third of the companies surveyed have no structured escalation process for any of the risk types identified in Figure 19.

**Figure 19. Escalation of tolerances and limits breaches**

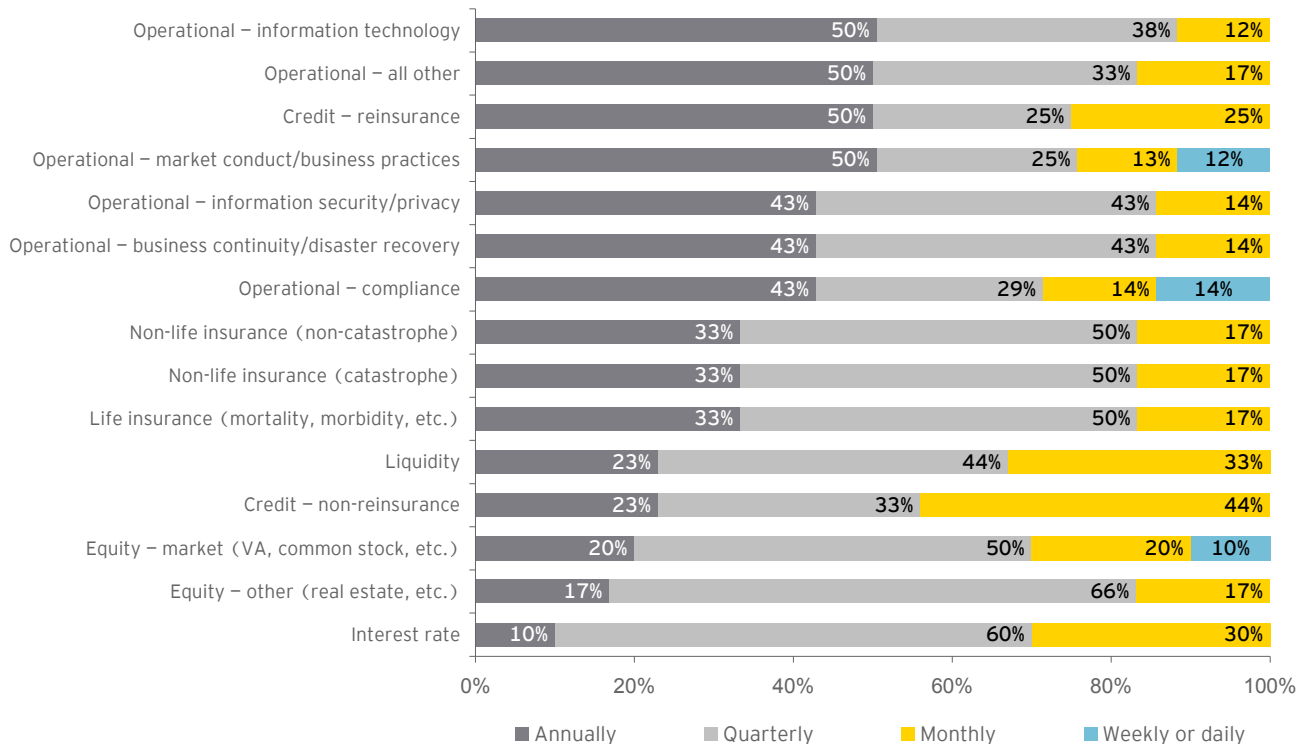


## Reporting of tolerances and limits

The current predominant company practice is to report to an ERM or asset/liability committee on tolerances and limits positions – actual positions versus breaches – on a quarterly basis (Figures 20 and 21). A surprising number of companies report certain risk tolerances and limits only on an annual basis. In contrast to banking institutions, few insurance companies report on a weekly or daily basis.

During the past five to ten years, insurers have moved toward more dynamic management of risk, and many life insurance products have been designed with significant market risk elements. This move toward dynamic risk management and the acceptance of risks that trade on a minute-by-minute basis in the markets implies a need for much timelier reporting of risk positions, tolerances and limits than is demonstrated in survey responses.

**Figure 20. Tolerances reporting frequency**

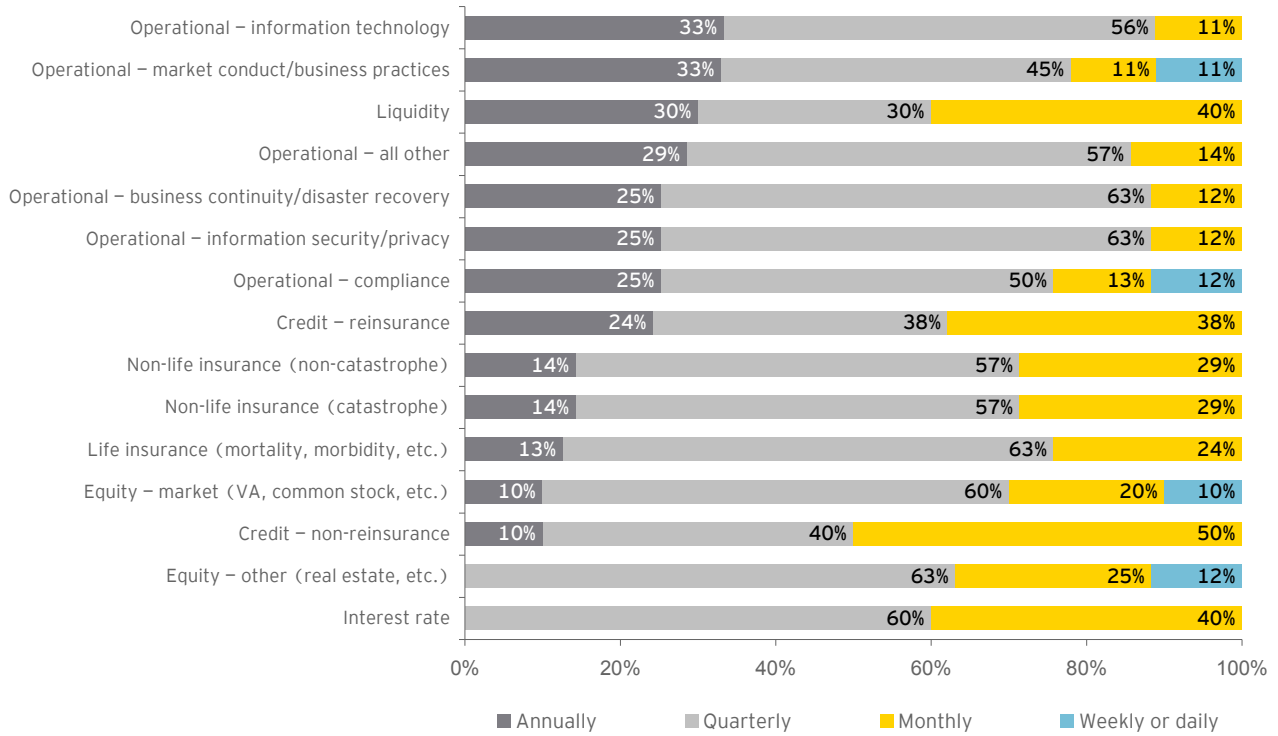


“In our company, we have discussions as we approach a limit. We have ‘warning’ limits. We never have breaches.”

*Roundtable participant*



**Figure 21. Limits reporting frequency**



Formal monitoring and consistent escalation processes are not in place for many risks. Without timely identification of exceptions, risk tolerances and limits cannot ensure the business operates within management’s expectations. Without consistent escalation processes that require actions and decisions regarding breaches, risk tolerances and limits serve little valid business purpose.

“A year is a long period of time. The world can change in a year.”  
*Roundtable participant*





### III. Risk measurement, aggregation, reporting and monitoring

Insurance organizations are making progress in developing their enterprise-wide risk measurement and aggregation capabilities and practices. Almost all of the companies surveyed say that risk measurement and aggregation across their organizations are elements of the ERM policies that they either have in place today or are actively working on.

We asked companies two questions about risk measurement and aggregation:

- ▶ First, what types of risk do you routinely measure and what measures do you use?
- ▶ Second, what types of risk do you routinely aggregate across your organization and report to the corporate ERM committee and/or board?

The responses to these questions suggest many companies are leveraging their existing historical methodologies and data to measure risks. It also appears that most of the progress they have made has been in aggregating within a risk rather than across risks. There is also no consistency among companies about the specific measures used for specific risks – and no single measure is emerging as a common tool across the industry.

For example:

- ▶ Interest rate risk is by far the most commonly aggregated risk. Duration is frequently used to model interest rate risk, with VaR, convexity and EaR also having moderate support.
- ▶ Equity market risk is often aggregated using VaR and EaR, with several respondents saying they also used the Greeks.
- ▶ Credit risk is also aggregated using VaR and EaR. Several participants also responded that the notional level of exposure was a key measure.
- ▶ For life insurance risk, VaR and “actual-to-expected” were the most common risk measures; non-life insurance risks are aggregated by all of the P/C companies and some of the life and reinsurance companies, with VaR as the most common risk measure.
- ▶ Liquidity risk is aggregated by most of the surveyed companies, with a variety of methods used – cash-flow projections, reliance on rating agency or internal liquidity ratios and VaR.
- ▶ VaR is the most commonly used risk measure across all risk categories and by all companies and shows early signs of becoming an industry norm.
- ▶ Despite its increasing use, EC is not frequently used to aggregate enterprise-wide risk within each risk class. EaR is used in combination with EC to aggregate some risks; one company uses EaR for some risk classes, but without EC.

Companies face two challenges in producing an enterprise risk measure. The first is creating a common risk measure across risks and business lines. As indicated above, most organizations are leveraging legacy methodologies and metrics, which will limit their ability to create common metrics with a common risk horizon.

The second challenge is aggregating the individual risk metrics. Companies that successfully measure their risks on a consistent basis are much better positioned to aggregate individual metrics across risks and business lines to create an enterprise-wide view of risk. Those that do not have common metrics (the majority today) may find aggregation much more difficult. Until companies adopt more common measures of risk, they will have difficulty aggregating and managing risks across the enterprise in a meaningful way, controlling aggregate exposures and linking risk measures to risk appetite.

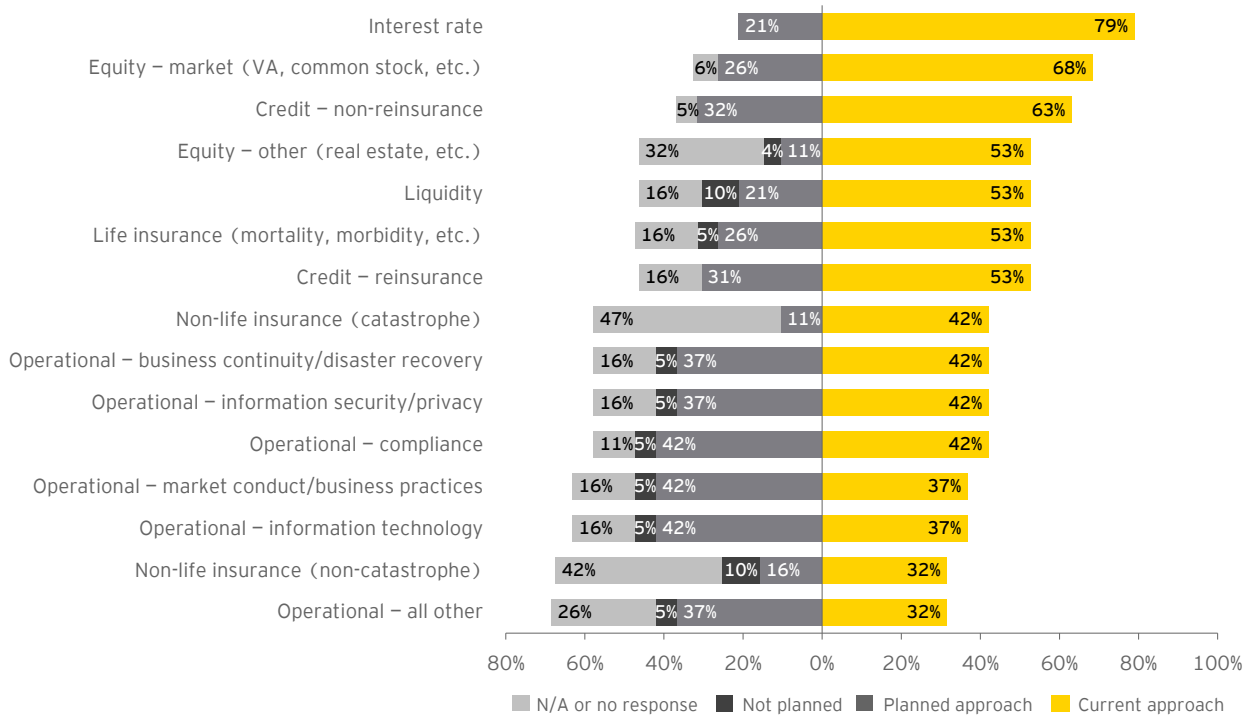
## Types of risks aggregated

As with risk tolerances and limits, most companies have made progress in aggregating risk types at an enterprise level and reporting them to their ERM committee and/or the board. However, there is progress still to be made. While most companies have the ability to generate ad hoc information on risks and exposures, their ability to aggregate and report exposures across risks or across the organization is limited. Interestingly, most risk types are aggregated by roughly only half of the companies today (Figure 22).

Insurance companies have spent considerable time quantifying and aggregating market risks, including interest, equity and credit. Given the nature of the options and guarantees offered by the life insurance industry, it is understandable that these risks receive the most attention. Given the correlation of equity and interest rate risks, many organizations measure interest and equity risks using integrated scenarios.

The aggregation and reporting of other risks is more limited although a majority of organizations indicate that they plan to aggregate virtually all risks within the next three years. In order for management to make informed decisions on pricing and the strategic management of the business, companies must develop the ability to generate a comprehensive enterprise risk measurement.

**Figure 22. Risk types routinely aggregated across organization**





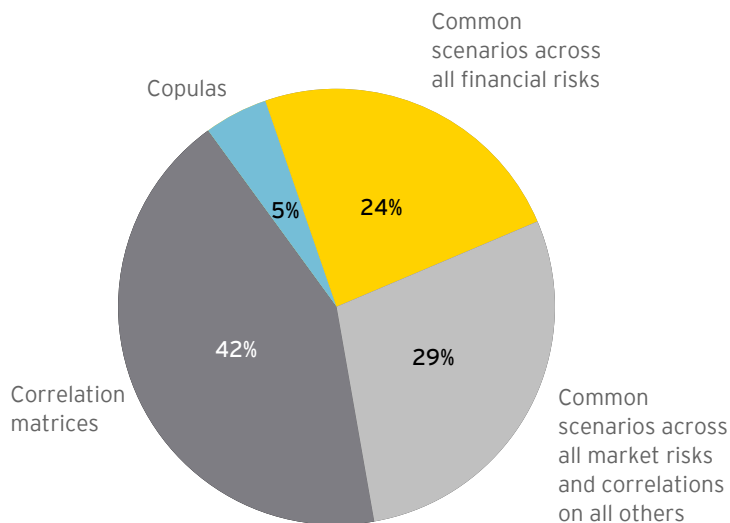
## Risk aggregation methodology

Respondents most frequently use common scenarios for aggregating and modeling capital market risks. Of the respondents, 29% use common scenarios across all capital market risks – and use both statistical and judgment-based correlations for other risks; 24% use common scenarios for all financial risks (Figure 23). There appears to be an industry trend away from the use of correlation matrices.

While the use of common scenarios is theoretically appealing, there are challenges to applying this technique across all risks faced by insurance companies. The time required to generate and run the scenarios can be prohibitive. This is evidenced by companies that have had an EC process in production for two years or more, among which 86% say they use correlation matrices and only 14% use common scenarios. When setting the correlation assumptions, companies generally rely on statistical support augmented by professional judgment.

The survey results indicate there is much work to be done here. The industry is only now coming to grips with practical solutions, such as replicating portfolios, computational shortcuts and proxy measures of risk, in order to enable practical, efficient and timely aggregation of risk exposures.

**Figure 23. Risk aggregation methodology**



## Impediments to risk aggregation

Both survey and roundtable participants say their companies' desire to aggregate risk exposures far outstrips the ability of the current methodology and systems to support their doing so.

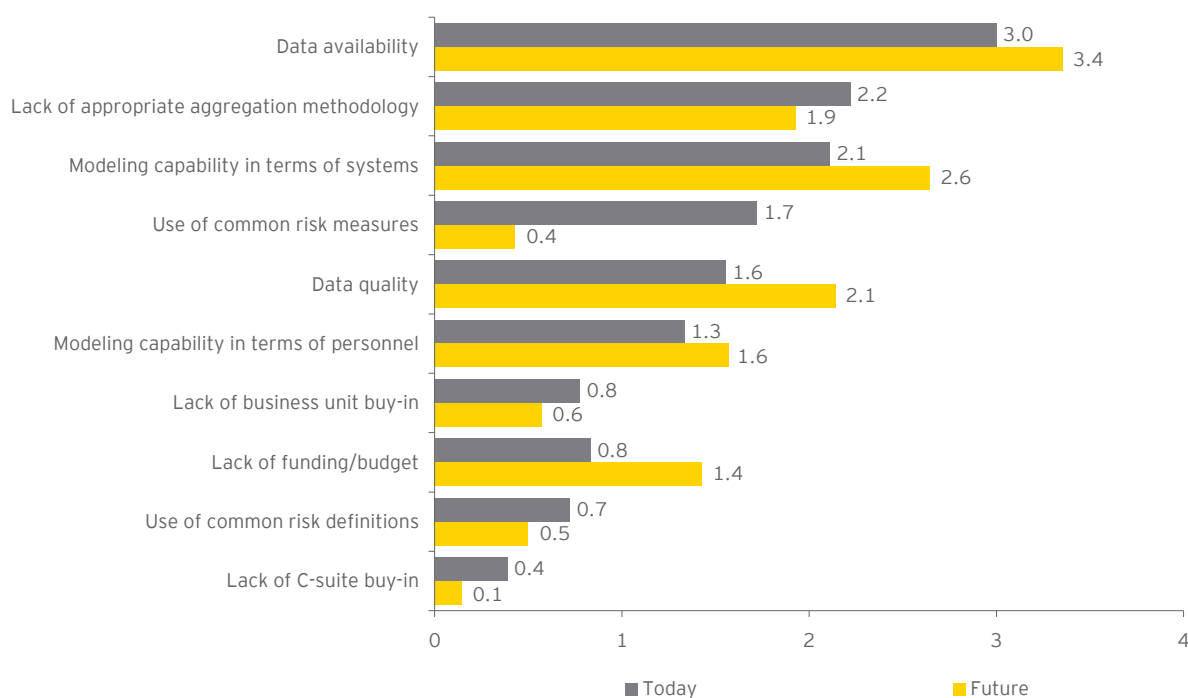
The top five impediments to risk aggregation today are (Figure 24):

- ▶ Data availability
- ▶ Aggregation methodology
- ▶ Modeling systems capability
- ▶ Common risk measures
- ▶ Data quality

Looking ahead two to three years, 28% of companies say they expect to make significant progress in key areas such as strengthening aggregation methodology and 22% in adopting common risk measures. But data availability and modeling capability will still be major impediments.

It is interesting that participants do not cite lack of C-suite buy-in as a major impediment to their implementation of risk aggregation across the enterprise today – and there is even less concern about this being an issue in the future. Given the significant practical impediments to implementing an effective enterprise-wide aggregation of risk, top-level support will be of increasing importance. Without continually improving risk aggregation, companies will find it difficult to adopt risk-adjusted performance measurement or integrate risk more meaningfully into strategic decision-making.

**Figure 24. Current and future impediments to risk aggregation**



Weighted average ranking of the top 5 potential impediments to risk aggregation: a ranking of 5 indicates the greatest impediment and a 1 indicates the lowest impediment.

## Value of risk aggregation

Companies recognize a broad range of value that risk aggregation can provide – both today and in the future. Today, companies say the greatest value of aggregation lies in consistent risk measurement, strategic decision-making and managing day-to-day risk exposures at the corporate level (Figure 25).

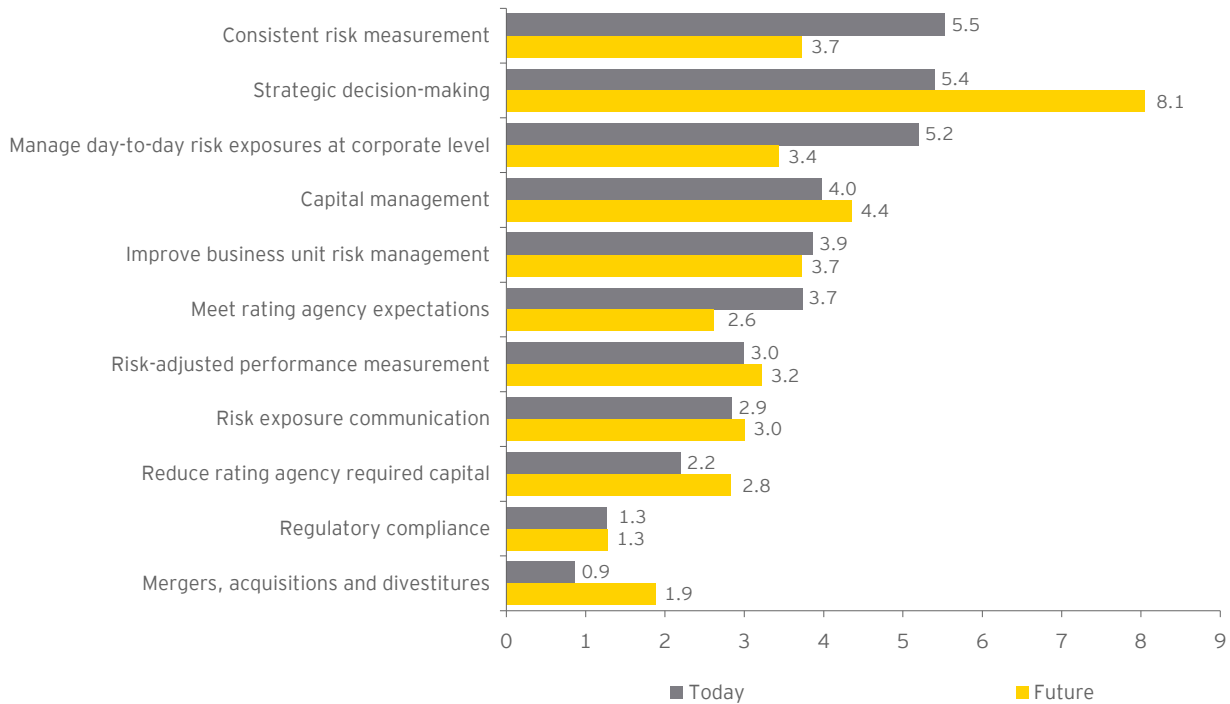
Looking ahead three to five years, companies appear optimistic that risk aggregation will be an even more powerful tool – particularly for strategic decision-making. It will also increase in importance for capital management, communication of risk exposures and capital reduction required by rating agencies.

“Boards will need to be better educated about understanding and appreciating the value of the new risk measurement and aggregation capabilities. Company management will need to step up to greater investment in risk management.”

*Roundtable participant*



**Figure 25. Value of risk aggregation**



Weighted average ranking of the top 10 potential value statements: a ranking of 10 indicates the greatest value and a 1 the least value.

Risk aggregation is a growing need. While companies are making progress, aggregation still lags. There is no standard definition of aggregation and no recognized best-practice methodology for aggregation. Data availability and data quality are major issues. Some companies are able to aggregate risk at the product level but cannot aggregate across risks, geographies or their enterprise.

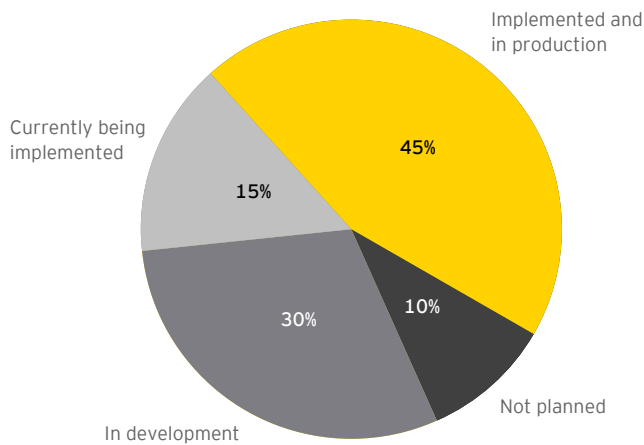
In order to achieve this, companies will need to invest more in infrastructure, data availability and measurement and modeling technology during the next few years.

## Economic capital

EC as a risk-reporting measure is gaining widespread adoption throughout the European and North American insurance communities.

Companies are making substantial investments and progress in implementing their EC frameworks; 45% say they have implemented and placed EC in production, 15% are currently implementing EC and 30% are in the development phase (Figure 26). This progress has been made despite organizational, technical and cultural challenges.

**Figure 26. Implementation of economic capital**



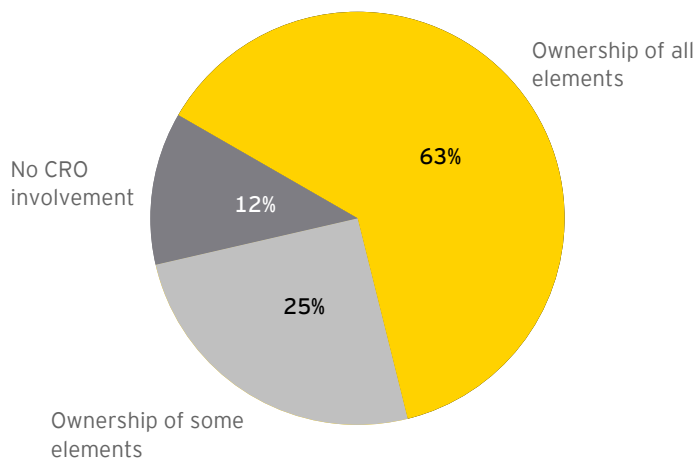
**Economic capital:** EC is assumed to mean a first principle-based methodology that utilizes financial modeling to produce risk distribution (or tail portions of a distribution). Capital approaches that modify existing rating agency, risk-based capital factors or purely deterministic factor-driven approaches are not considered EC for purposes of this survey.

**Production:** production is assumed to mean that methodology has been completed, systems and processes are in place and EC amounts are routinely produced (e.g., quarterly), reported and used in the management of the business.

## Ownership of economic capital

Companies are fully engaged in developing and utilizing their principles-based EC frameworks. EC implementation requires top-down executive buy-in as well as broad organizational participation at various levels and stages of implementation. Companies with CROs make it clear that their CROs are involved either in all (63%) or some (25%) of the key elements of EC implementation, including guiding the overall methodology, process, data and reporting (Figure 27). This means that at 12% of the companies surveyed, CROs do not play a role in EC ownership.

**Figure 27. CRO ownership of economic capital**





Of the companies with CROs that answered our question about ownership, 63% say their CRO has complete ownership of all EC activities while their chief actuaries remain key players, with 56% in key roles. At virtually all companies, multiple individuals and functions are involved in implementing EC (Figure 28).

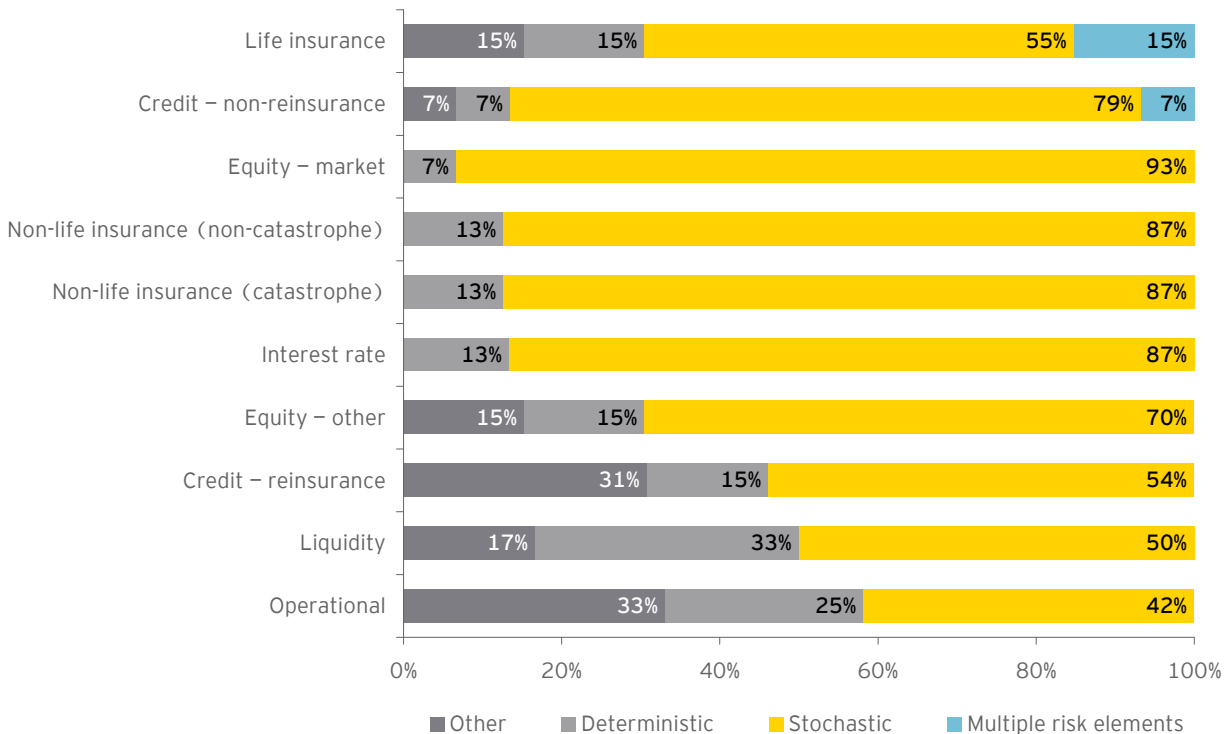
**Figure 28. Economic capital ownership**

Percentage of companies reporting economic capital ownership				
	Method	Process	Data	Reporting
CRO	78%	72%	56%	72%
CFO, CIO, CCO or ERM committee	39%	44%	44%	39%
Chief actuary	39%	33%	33%	39%
BU level	17%	22%	50%	28%
Valuation actuary, treasurer or ALM officer	28%	22%	33%	33%

### Risk elements included in economic capital

For most risk types included in EC calculations, companies are using predominantly stochastic methods. This demonstrates increasing sophistication of measurement (Figure 29). However, as noted at the roundtable, life insurance companies still have progress to make, particularly in capturing customer-behavior risks.

**Figure 29. Risk elements incorporated into economic capital**



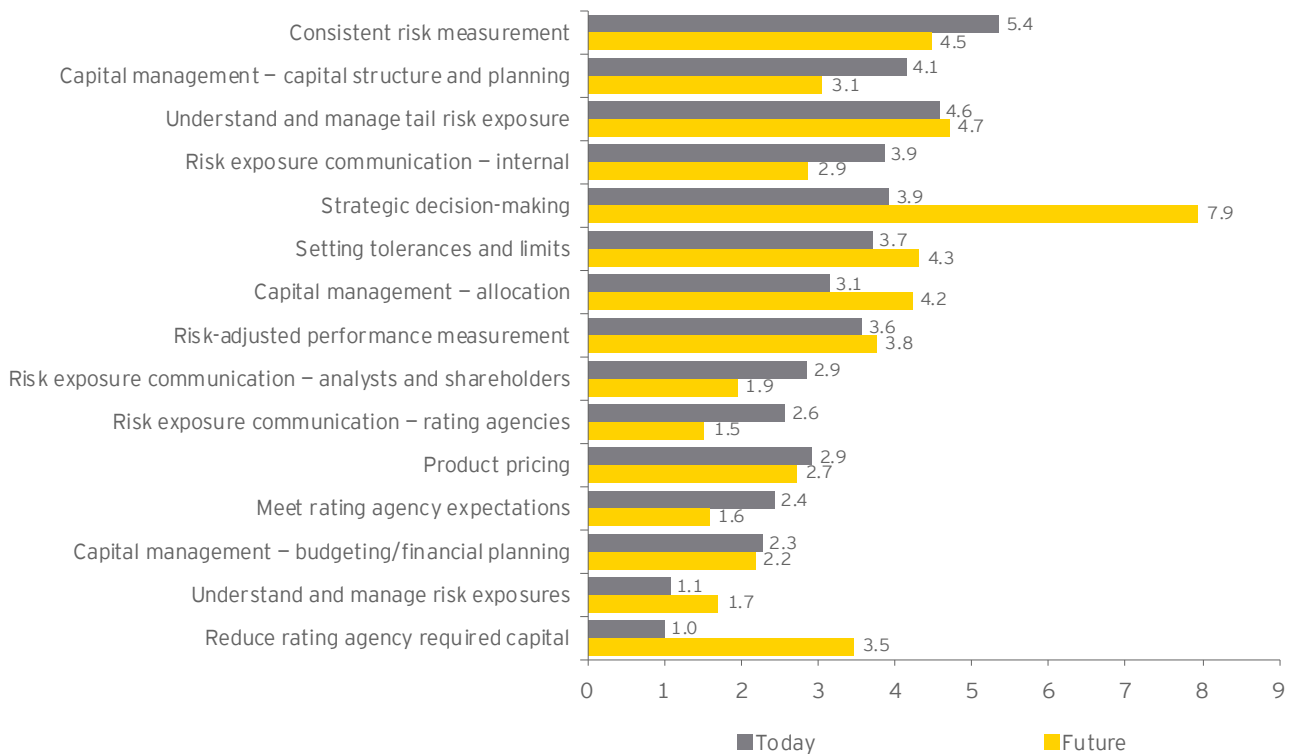
## Uses of economic capital

EC is used today in a practical way to communicate exposures, set tolerances and limits, manage tail exposure and provide consistent risk measurement as a tool for strategic management and capital management (Figure 30). In the future, EC will be important in allocating capital and working with rating agencies to reduce required capital levels, setting tolerances and limits, risk-adjusted performance measurement and product pricing.

Respondents see EC taking on dramatically greater importance in strategic decision-making – a powerful role similar to the future projected importance of risk aggregation.

In effect, respondents are saying that EC is a strong driver, not so much in managing risk but in understanding, measuring and communicating risk and its impact on critical performance measures of their enterprise. EC will become an important measure in how companies run their business and how they measure performance. Companies that do not develop correctly calibrated EC models or do not do so in a timely manner will likely face threats from more sophisticated competitors that effectively use calibrated and timely models.

**Figure 30. Uses of economic capital**



Weighted average ranking of the top 10 uses of economic capital: a ranking of 10 indicates most important and 1 least important.

“We use EC as a way to get to the right intuition about various issues. EC is a model. If we change assumptions, we get different results.”

*Roundtable participant*

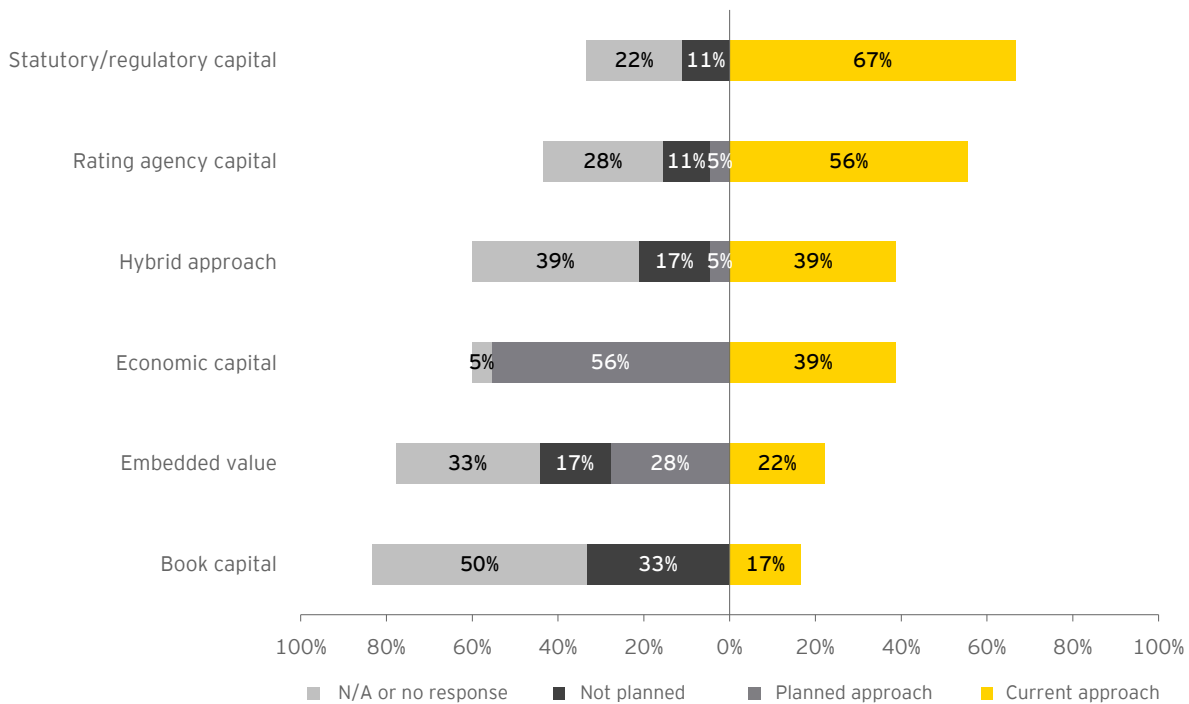


## Cost of capital

For product pricing, companies are transitioning from statutory and rating agency capital to EC (Figure 31). In the next three years, a majority of companies expect to be using EC and will need to address the issues and challenges of using it in a world in which GAAP, statutory and ratings-based capital are still the key business constraints.

**Figure 31. Cost of capital measures**

### Current and future use of cost of capital measures in product pricing

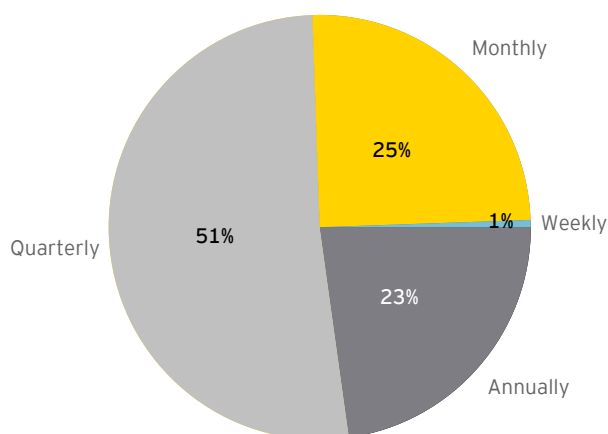


Companies are working on improving and using EC. There are significant challenges remaining, particularly in adopting the strong governance and change management efforts that will be required to realize fully the value of EC.

## Risk reporting

Most risk positions are reported quarterly or monthly (Figure 32), as we saw in the reporting of risk tolerances and limits. Operational risks and liquidity risks are usually reported quarterly or annually, and other risks – such as equity risk, credit risk and interest rate risk – are reported monthly or quarterly.

**Figure 32. Frequency of enterprise-wide risk position reporting**



The predominant recipients of risk reporting are, predictably, the CFO, CRO, CEO and the ERM committee (Figure 33). Detailed survey findings suggest that business unit heads and business unit CROs – executives responsible for running the business – routinely receive less enterprise-wide risk information. Surprisingly, nearly one-fifth of companies say their board members do not receive routine risk information, raising the issue of whether companies are providing their boards with enough information to exercise effective oversight.

In a turbulent financial environment, with risk-taking of growing importance in board-level decisions, companies must improve the timeliness and content – and even the format and understandability – of the risk information they give to key audiences – particularly their boards, executive committees and business unit leadership. Although there is ongoing ad hoc reporting about specific urgent risk issues, routine reporting practices are instrumental in building awareness and educating boards about risk issues.

**Figure 33. Recipients of risk information**

	Board or board committee	CEO/ executive management	CFO	CRO	CIO	ERM committee	BU heads	BU CRO/ CFO
Credit – non-reinsurance	72%	78%	83%	78%	78%	56%	50%	33%
Liquidity	56%	56%	67%	61%	61%	56%	39%	33%
Operational risks	54%	57%	58%	52%	26%	50%	46%	28%
Interest rate	50%	67%	89%	78%	78%	67%	56%	28%
Equity – market	50%	61%	78%	72%	72%	61%	44%	44%
Credit – reinsurance	39%	56%	61%	56%	33%	50%	39%	28%
Equity – other	28%	44%	50%	44%	56%	33%	39%	39%



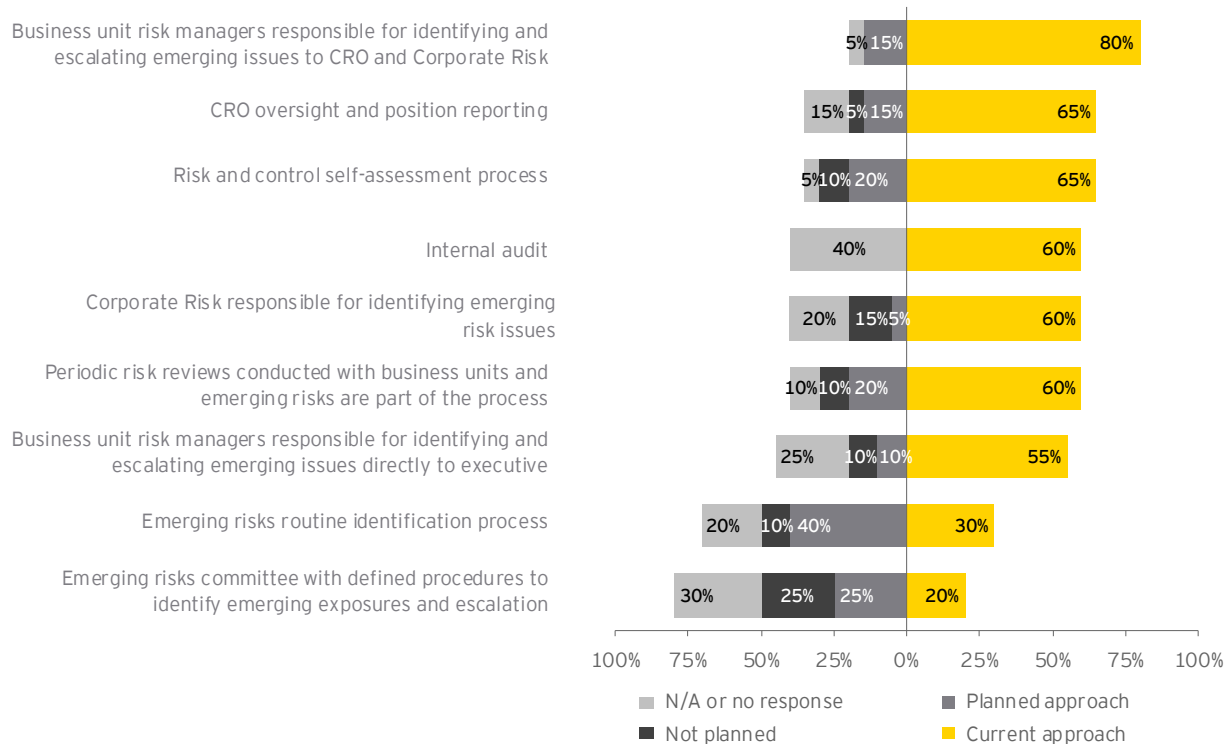
## Emerging risks

As demonstrated throughout the current credit crisis, an important component of risk monitoring and reporting is – or should be – how companies handle the monitoring of emerging risk issues, including decisions about when emerging issues need to be escalated upward. As we saw earlier, identification of emerging risk is one element still to be addressed in most companies' ERM policies, representing a crucial gap.

Today, most companies (80%) say their business unit risk managers are responsible for identifying and escalating emerging issues up to the corporate CRO and Corporate Risk function, while 60% also expect the CRO to identify emerging risks and become proactively involved in handling such situations (Figure 34).

Looking to the future, companies indicate they are working to develop a routine process for identifying emerging risks (40%). These processes are a key to proactive identification and management of risk, so the fact that less than one-third of companies currently have a formal process is a concern.

**Figure 34. Processes to handle emerging risks**





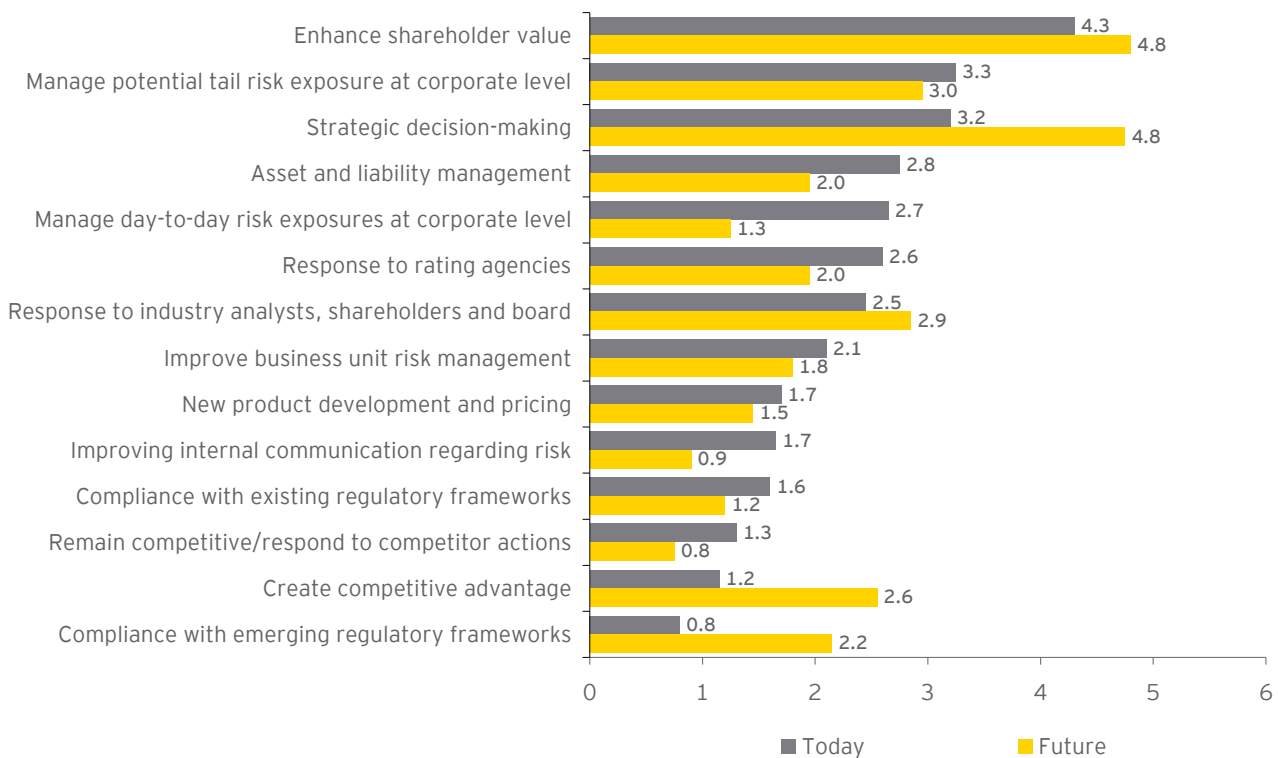


## IV. Strategic management and decision-making

In many organizations, risk management and measurement are evolving, becoming stronger and gaining strategic importance. A critical objective of our survey was to determine to what extent risk is – and will be – embedded into companies' decision-making processes in order to improve those decisions and, therefore, improve financial and operating results.

When we asked survey participants about the current and future purposes of risk management, they ranked as the top three current purposes enhancing shareholder value, managing potential tail risk exposure and strategic decision-making (Figure 35). Looking forward three to five years, companies see even more value emerging from risk management and measurement in terms of those three objectives – and a strong fourth in creating competitive advantage.

**Figure 35. Current and future goals of risk management**



Weighted average ranking of the top 7 factors influencing an organization's investment of funds, resources and risk management priorities: a ranking of 7 indicates most influential and 1 means least influential.

### Risk management's influence on decision-making

Do CROs have real "clout" in their organizations? The vast majority of survey participants say they currently exercise some influence on product design and pricing (81%) and investment strategy (81%) (Figure 36). On the other hand, it is clear that many CROs do not hold explicit authority over some key decision processes and, in fact, as noted earlier, much of their influence is implicit, rather than formal or explicit.

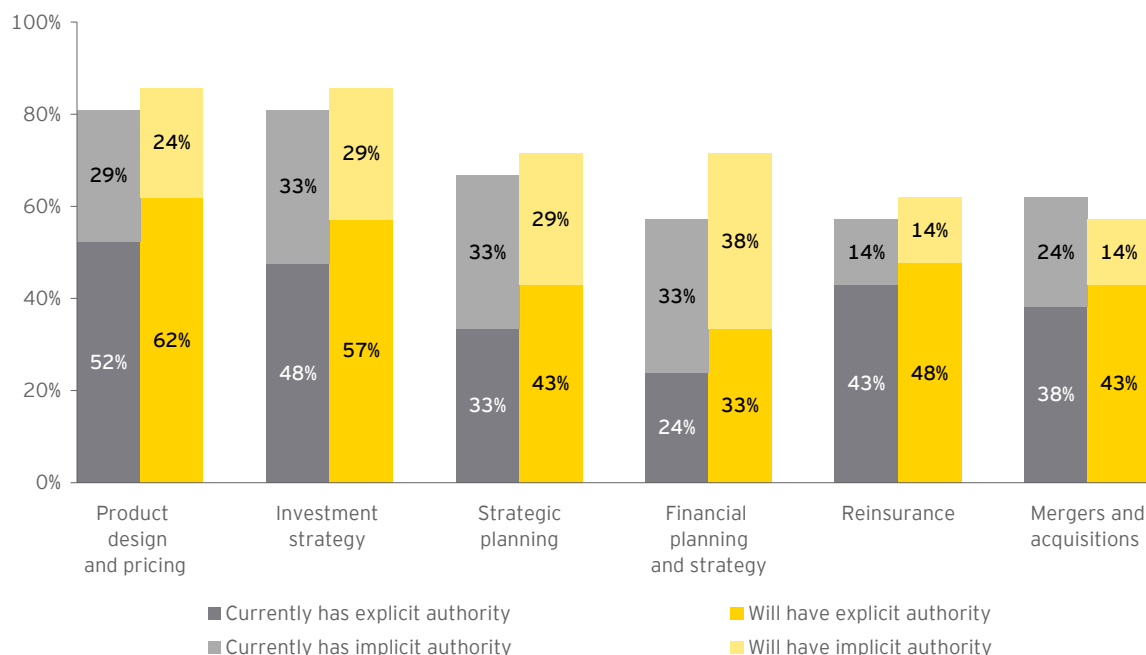
“Today, risk management adds value at the product level, but not so much at the product portfolio level. We do not have the appropriate risk data to input into strategic planning. We need to build a tool that is useful for strategic planning.”

*Roundtable participant*

As compared to pricing and investment strategy, there appears to be less CRO involvement in important areas such as reinsurance, mergers and acquisitions, strategic planning and financial planning and strategy. While respondents have indicated that their organizations see risk management becoming an ever more important element of strategic decision-making, it is hard to see how this will happen without increasing the power of CROs to influence decisions.

Much of the present limited influence of CROs likely derives from the newness of the CRO position but, in our view, it also relates to the processing systems and approaches organizations have taken in building their risk infrastructure. Most risk infrastructures are designed to capture current risk exposures, but for effective decision-making, it is critical to understand the impact of “what if” (e.g., “What if we sold this product?”) exposures.

**Figure 36. CRO, corporate risk, ERM committee influence in risk decisions**



CROs have relatively limited authority to make or override decisions that involve risk. Instead, many CROs influence decisions through relationships, escalation and networking. But perhaps even more significant, CROs believe their authority will increase within the next three years.

Companies must consider whether a CRO’s oversight role should provide the ability to reject actions that exceed the company’s risk appetite, to control the limits and reject limit exceptions or to override business decisions involving the taking of risk (such as for a new product with unacceptable risk characteristics or unhedged risk exposures).

Without continued high visibility and access to top management and the board of directors, it is difficult for CROs to exert sufficient influence to ensure risk is appropriately considered in making key management decisions.

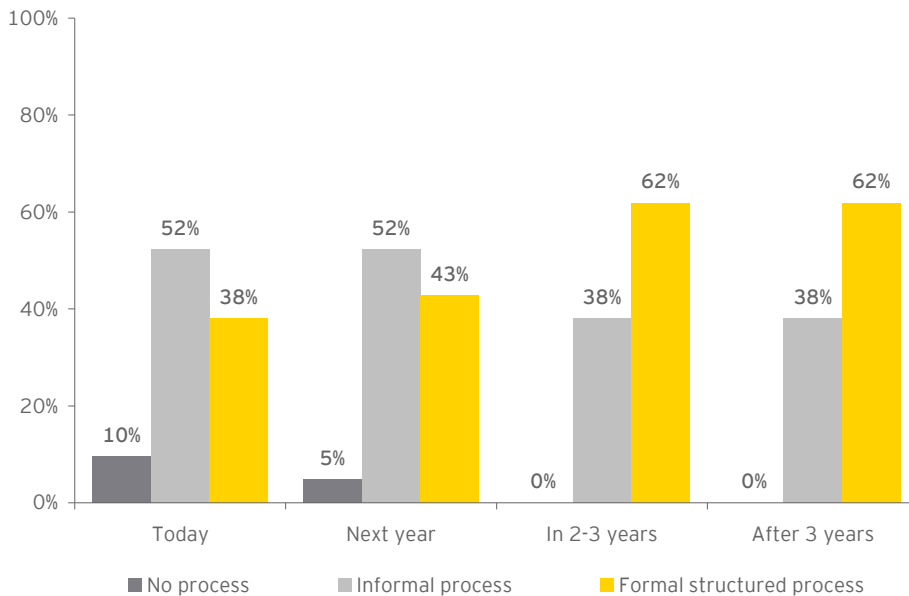


## Risk-versus-reward decision process

The insurance industry's traditional risk focus has been only on risk, with less emphasis on risk versus reward. Traditionally, and as we see today, in the current credit crisis, financial services firms have always found it a challenge to factor risk more meaningfully into revenue decisions.

Presently, insurance companies say they are slowly transitioning toward risk-versus-reward decision-making frameworks. In what would represent a major culture change for their organizations, nearly one-quarter of the companies say within the next two to three years, they will be moving from having either an informal process or no process at all to a formal, structured process for making risk-versus-reward decisions (Figure 37).

**Figure 37. Risk-versus-reward decision process**



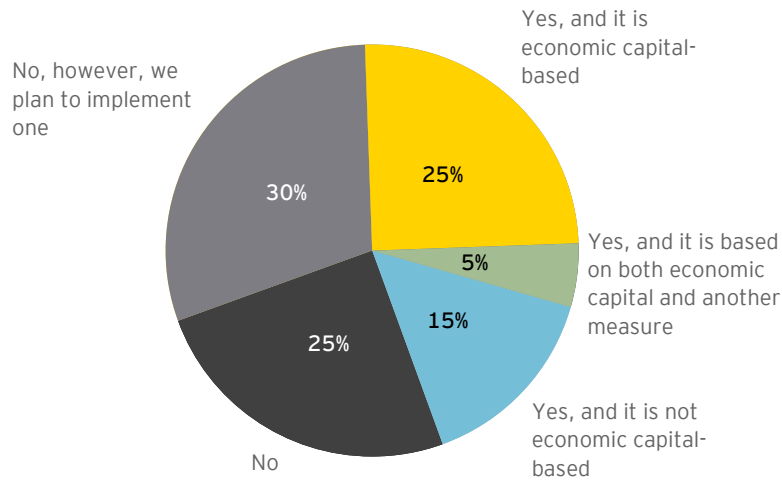
## Performance management

Three-quarters of the companies say they have or are moving toward implementing a risk-based performance measurement system (Figure 38). Thirty percent say they currently use a risk-based performance measurement system based on EC; 15% of companies use a system that is not based on EC, and 30% of companies are planning to implement such a system.

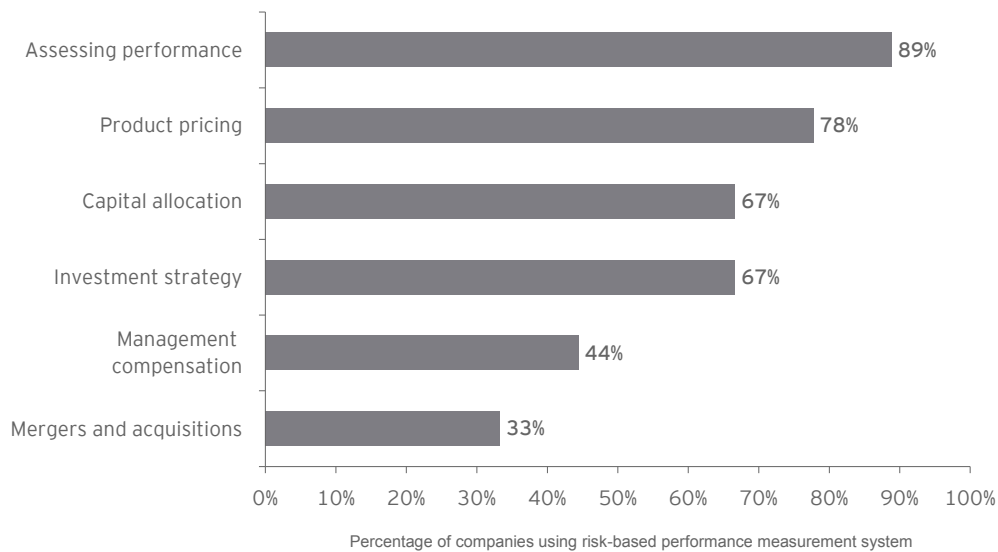
“You at least must give us credit for our confidence that EC will become the dominant performance measure. This is a big challenge.”

*Roundtable participant*

**Figure 38. Existence of a risk-based performance measurement system**



**Figure 39. Uses of risk-based performance measurement systems**



Companies that have implemented a risk-based performance measurement system use it for a variety of purposes – including capital allocation, product pricing and investment strategy. Fewer use it in management compensation formulas or for merger and acquisition analysis (Figure 39).

One-third of the companies say they are in the process of implementing a risk-based performance management system. These companies seem optimistic about their systems’ usefulness, saying it will be used for a wide range of purposes.



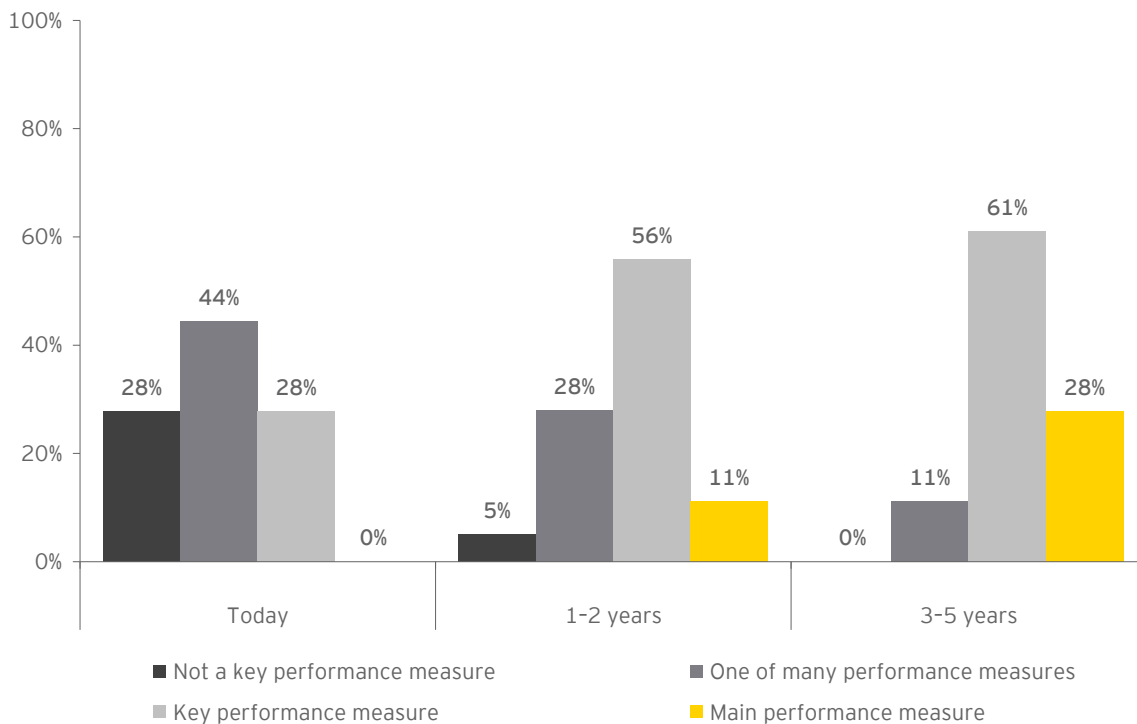
Risk-based performance measurement would represent a major change in how insurance companies measure performance and manage themselves. While there are clear benefits, implementation and acceptance by business and finance leaders will be critical. From our experience, this is an area on which the industry has not yet focused sufficient time and resources.

## Economic capital as a performance measure

EC appears to be gaining acceptance as a key element in measuring performance. Nearly three-quarters of the companies are using EC today in that capacity, but most say it is just one of many measures they use (Figure 40).

Companies seem even more bullish about using EC during the next one to two years – confident they will be able to win wide corporate buy-in – with 67% of the companies saying they will use EC as either a key or primary performance measure, and 89% of the companies say EC will become either a key or main performance measure during the next three to five years.

**Figure 40. Economic capital as a performance measure**



“Getting companies actually to use EC is the sell job. I am trying to show examples of EC. You need to create and illustrate the value proposition. Even bolder – and we’re not there yet – would be to embed EC in executive compensation programs.”

*Roundtable participant*

## Impediments to integrating risk into the decision-making process

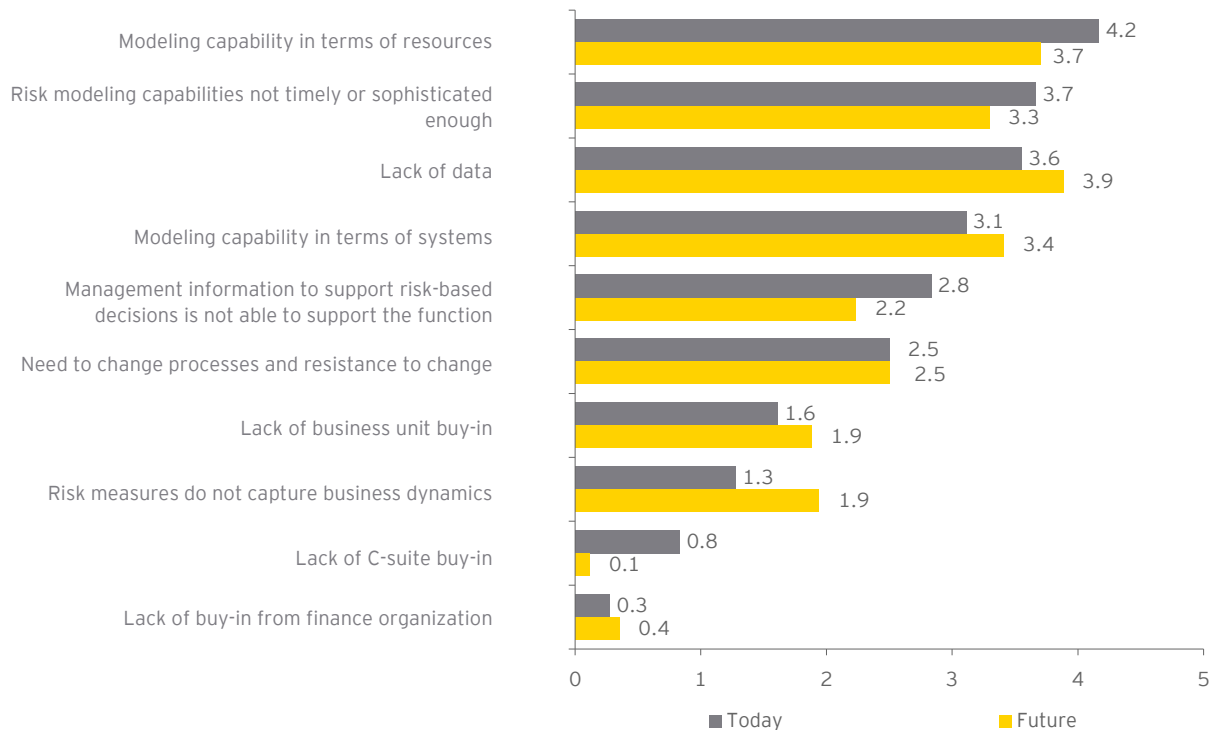
Despite their growing influence in decision-making, CROs acknowledge continuing impediments to the integration of risk into their companies' decision-making process. There is a strong belief among respondents that a lack of risk-modeling capability in terms of resources and sophistication and a lack of data are significant impediments today and will continue to be so in the future (Figure 41).

On the other hand, few respondents feel that a lack of buy-in at the C-suite, business unit or finance department levels is a major issue today or will be in the future.

"In the future, I believe retiring CROs will be in demand to become board members."

*Roundtable participant*

**Figure 41. Impediments to integration of risk into the decision-making process**



Weighted average ranking of the top 7 potential impediments to the integration of risk into the decision-making process: a ranking of 10 indicates greatest impediment and 1 indicates lowest impediment.

Effective strategic decision-making using risk can only be accomplished in proportion to a company's ability to measure risks on a timely basis. It will also be critical to educate users and gain buy-in for new measures of risk and financial performance. These are significant changes in how insurance organizations make strategic decisions and measure financial performance. Such changes will require both new measurement tools and a different mindset and management culture, which will be difficult to achieve and sustain.



## V. Conclusion

Our survey suggests that insurance companies are, indeed, moving to the next level of effective risk management. The proverbial glass is at least half full and is filling further at a measured pace. Throughout the survey responses, there is a sense of optimism that current obstacles will either be overcome in the future or, even if they are not overcome, progress will still continue. This optimism was tempered, however, by more realistic observations from roundtable participants that continued progress will not be fast or easy.

While insurance companies – particularly at the board level – are becoming more aware of and concerned about risk, other business priorities can still capture their attention. It is not clear that there is always sufficient and consistent recognition of the significance of risk management to long-term value creation. Nor is it clear that companies adequately recognize the magnitude of operational change and the need for culture change that will be required to permanently implement comprehensive ERM frameworks.

The survey suggests there are gaps, areas of immaturity and a necessity to evolve to higher levels of rigor and discipline. Progress is needed in effectively and permanently integrating companies' risk practices into their strategic and business decision-making. The roles and responsibilities of CROs in risk oversight, aggregation and risk-taking vary widely and will also have to evolve and strengthen.

Companies will need to continue investing – and, for a time, perhaps increase the level of investment – in risk measurement. Limitations and lack of sophistication in modeling and the lack of critical data for risk-reporting and decision-making must be overcome. And whether or not risk has yet been sufficiently “baked” into the strategic decision-making and strategic planning processes is a question requiring more study.

Increasing and higher-quality engagement in risk and risk management issues by C-suite and board leadership is impressive and encouraging. However, more education of leadership – particularly at the board level – is needed to help ensure the continuing maturation of risk management and decision-making. CROs and other risk management executives will have to challenge themselves and their colleagues to improve the quality and understandability of their communications with executive and board leadership.

Finally, better communication and the building of stronger functional and personal linkages among all the risk stakeholders within a company will be critical in moving risk leadership to the next level and helping the industry achieve its potential.





# Survey advisory panel, survey participants, Ernst & Young survey project leadership

## Survey advisory panel

Larry Moews Allstate	Mike Mahaffey Nationwide
Craig Raymond Hartford Financial Services	Gideon Pell New York Life
Bev Margolian Manulife	Helen Galt Prudential

## Survey participants

Allstate	Mutual of Omaha
Aviva USA	Nationwide
Endurance	New York Life
Erie Insurance	Principal Life Insurance
Genworth	Progressive Insurance
Guardian	Prudential
Hartford	RGA
ING USA Life	Sammons Financial
Lincoln National	Scottish Re
Manulife Financial	Securian Financial
MassMutual	Sun Life Financial

## Ernst & Young survey project leadership

Nancy Church	Dwane Gossai
Douglas A. French	J. Chris Karow – survey project leader
William Gornall	Frank Sabatini





**About Ernst & Young**

Ernst & Young is a global leader in assurance, tax, transaction and advisory services. Worldwide, our 130,000 people are united by our shared values and an unwavering commitment to quality. We make a difference by helping our people, our clients and our wider communities achieve potential.

For more information, please visit [www.ey.com](http://www.ey.com).

**About Ernst & Young Financial Services**

Ernst & Young's Financial Services practice, comprising nearly 30,000 professionals worldwide, is a leader in providing assurance, tax, transactions and business advisory services to asset management, banking, capital markets, and insurance clients. Our multidisciplinary resources are led by over 2,600 partners located in key financial centers around the world. Ernst & Young is the only public accounting firm with a separate business unit dedicated to the financial services marketplace.

**About Ernst & Young's Insurance and Actuarial Advisory Services**

Ernst & Young's North American Insurance and Actuarial Advisory Services (IAAS) practice includes 175 professional staff throughout the United States, Mexico, Bermuda and Canada. IAAS helps clients address risk, reporting, capital management, merger and acquisition due diligence and integration, retirement income and actuarial department transformation issues, and provides insurance risk management and claims advisory services.

[www.ey.com/us/actuarial](http://www.ey.com/us/actuarial)

© 2008 Ernst & Young LLP.

All Rights Reserved.

SCORE No. CB0054

This publication contains information in summary form and is therefore intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. Neither EYGM Limited nor any other member of the global Ernst & Young organization can accept any responsibility for loss occasioned to any person acting or refraining from action as a result of any material in this publication. On any specific matter, reference should be made to the appropriate advisor.

0804-0933050 NY