The Risk Enabled Enterprise®

Independent Research By

Chartis

The Risk Enabled Enterprise®

GLOBAL SURVEY RESULTS AND TWO-YEAR RESEARCH AGENDA

November 2013

In collaboration with IBM

About Chartis

Chartis is a leading provider of research and analysis covering the global market for risk management technology.

Our goal is to support enterprises seeking to optimize business performance through better risk management, corporate governance and compliance. We help clients make informed technology and business decisions by providing in-depth analysis and actionable advice on the broad spectrum of risk and compliance technology offerings. Areas of expertise include:

- Credit risk
- Operational risk and governance, risk and compliance (GRC)
- Market risk
- Asset and liability management (ALM) and liquidity risk
- Energy and commodity trading risk
- Financial crime including trader surveillance, anti-fraud and anti-money laundering
- Insurance risk
- Regulatory requirements including Basel 2, Basel 3, Dodd-Frank, EMIR and Solvency II

Chartis is solely focused on risk and compliance technology giving it significant advantage over generic market analysts.

Chartis has brought together a leading team of analysts and advisors from the risk management and financial services industries. This team has hands-on experience of implementing and developing risk management systems and programs for Fortune 500 companies and leading consulting houses.

Chartis Research is authorized and regulated in the United Kingdom by the Financial Conduct Authority (FCA) to provide investment advice.

Visit www.chartis-research.com for more information.

Join our global online community at www.risktech-forum.com.

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1 About this research

The Risk Enabled Enterprise® is a two-year research initiative from Chartis, sponsored by IBM, that looks at the enablers of enterprise risk management (ERM).

The research will examine the strategic initiatives that firms need to take to become "risk-enabled" across key areas, including organizational structure and process, people and culture, and data and systems.

This report is the first in a series of quarterly publications that will form part of this research initiative. It contains the findings of our first survey, which provide the basis for the roadmap and goals for The Risk Enabled Enterprise® research initiative.

The online survey comprised 381 professionals working in a number of sectors around the world. Respondents came from a range of job functions, locations, and industries, although the USA (44%) and financial services sector (78%) provided by far the largest proportions in terms of geography and industry (see Appendix A for the full survey demographics). The full results of the survey are contained in the appendices. As part of the research, Chartis also carried out follow-up in-depth interviews with 25 respondents to the survey and held discussions with subject matter experts from IBM.

In this report we set out the research road map comprising a number of strategic initiatives and how they can enable a company's transformation into a risk-enabled enterprise. The two-year study will include a series of surveys, eliciting input from risk, compliance, and technology practitioners, as well as key stakeholders from business lines.

2 Executive summary

Most firms understand that robust enterprise risk management (ERM) will not only improve risk management; it will also help them to measure risk more accurately and develop a more sustainable business model. However, while simple in theory, ERM can be fiendishly difficult in practice.

Over the past decade, risk management has grown in sophistication. Most companies have invested in the structures, systems, and people that will allow them to manage risk and make strategic, risk-aware decisions on an enterprise-wide basis. Despite these investments, many firms continue to find ERM extremely challenging. Although they have a clear goal to become a risk-enabled enterprise, few understand the steps that they need to take in order to make that transition.

Findings from the Chartis survey conducted for this report highlight some of the challenges that firms face:

- Only 41% of respondents say that they have a well-formulated and communicated ERM process with sponsorship from the board of directors.
- Companies recognize that they need to strengthen organizational structure and processes to develop more effective ERM. This is a particular focus among financial institutions.
- From a people and culture perspective, there are two clear priorities: aligning incentives and behaviors, and engaging the front office in risk management.
- Respondents rank IT security as the number one priority for improvement, above risk data aggregation and reporting and risk assessments. This shows that technology is a source of risk, as well as an enabler of ERM.
- There is a growing convergence between quantitative and qualitative risk management activities. Qualitative risks, such as business risk and reputation risk, are now becoming as important as financial risks, such as credit risk and market risk.
- The key challenges that are preventing firms from achieving a more effective ERM program are enterprise level monitoring, model management, defining the risk appetite, and aligning risk and finance.

In this report, we outline the challenges that companies currently face in becoming risk-enabled enterprises, and introduce a number of strategic initiatives that can be applied as enablers of ERM. The results of the survey, as well as Chartis's in-depth follow-up interviews, suggest that these strategic initiatives should include the following:

- Model risk management
- Enterprise-level stress testing
- Conduct risk management
- Risk-based performance management

3 Global survey and key findings

Key findings

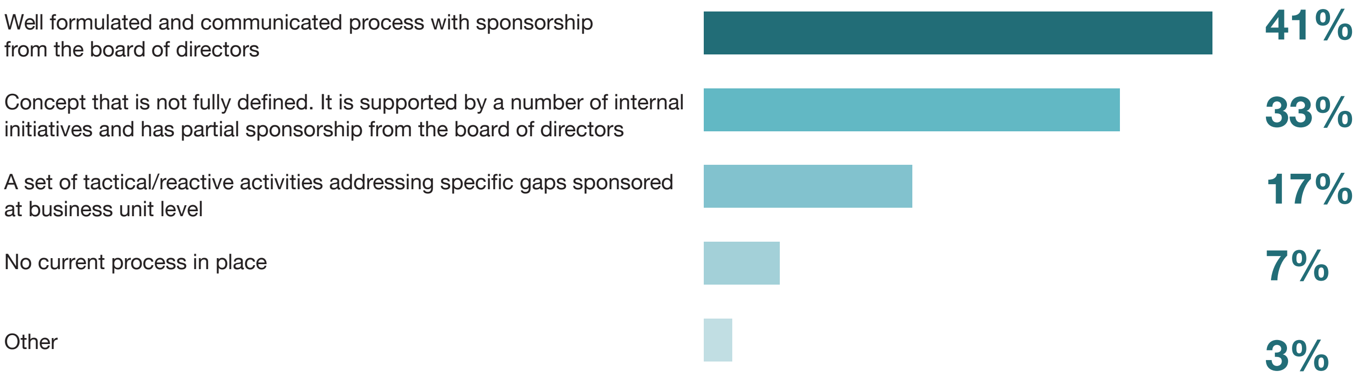
Most firms do not have robust ERM programs in place

Only 41% of respondents say that they have a well-formulated and communicated ERM process with sponsorship from the board of directors (see Figure 1). The remainder say that their ERM program is either not fully defined, is still a set of tactical activities, or does not exist at all. This shows that, while some firms are making progress through a well-supported and well-funded program, many more are having difficulties in implementing comprehensive ERM, and have not done enough to set up the organizational structures and processes required.

A key barrier to an effective ERM program is a lack of required leadership and sponsorship from the board. Without clear direction from the top of the organization, ERM remains poorly defined, is not organized in a coherent structure, and must rely on individual, reactive initiatives.

Figure 1: Approach to ERM

Which of the following options best describes your approach to enterprise risk management (ERM)?



Organizational structure and processes are seen as key enablers for ERM

With ERM still only well-formulated in a minority of enterprises, firms recognize that they need to do more. The key priority, according to respondents, is to strengthen their organizational structure and processes. Issues related to people and culture, and data and systems, follow and are ranked as broadly equal concerns (see Figure 2). These priorities differ between financial and non-financial institutions, however. As Figure 3 shows, financial institutions are far more focused on organizational challenges than non-financial institutions, and prioritize all three options more highly. For non-financial institutions, all three priorities are of broadly equal priority.

The focus on organizational structure and process shows that the journey to risk-enablement needs to follow a logical sequence. In the past, many companies prioritized systems and technology solutions, and did not do enough to instill the right culture and organizational structure. As a result, technology was implemented before firms were ready to use it. Today, however, respondents highlight the importance of creating the right environment and having the right staff to use systems and manage risk. In a follow-up interview, one CRO compared the emphasis on risk technology systems to having a Ferrari without being able to drive it or having the right roads on which to drive it.

Figure 2: ERM priorities for 2013-14

In terms of ERM, what are your organization's priorities for 2013-14?
[Score from 1-5, 1= Low priority and 5= High priority]

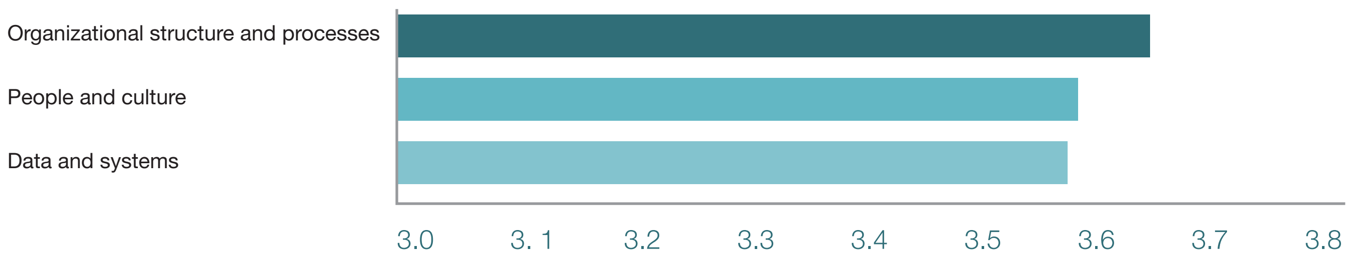
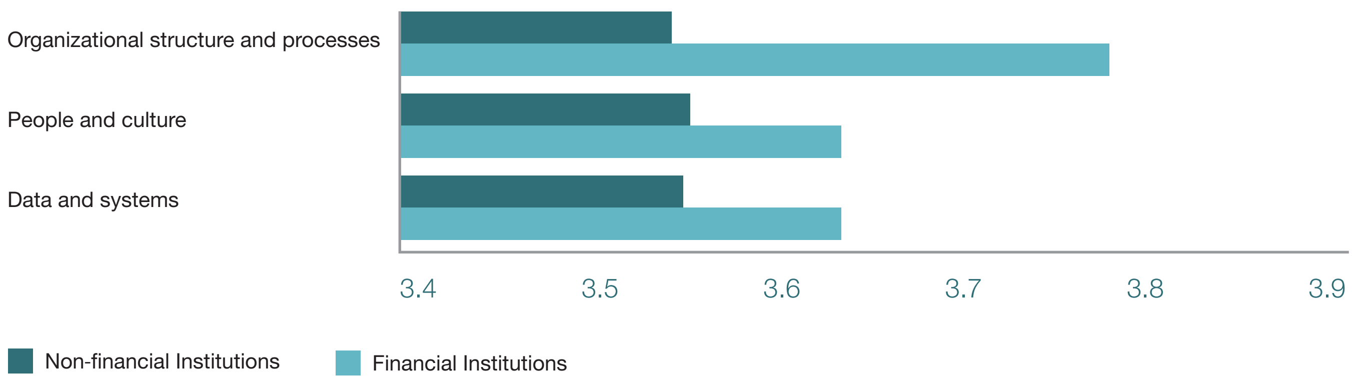


Figure 3: ERM priorities for 2013-14 for financial and non-financial institutions

In terms of ERM, what are your organization's priorities for 2013-14?
[Score from 1-5, 1= Low priority and 5= High priority]



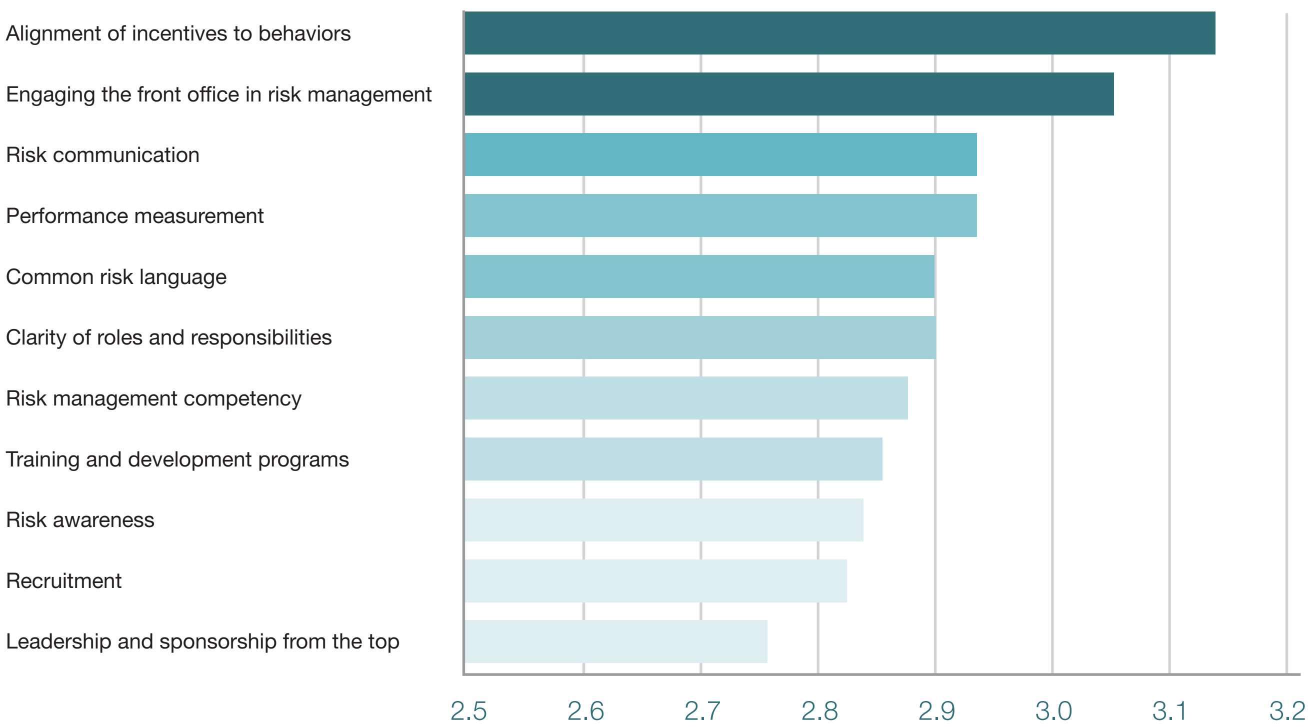
Alignment of people and incentives is seen as a critical success factor for breaking down traditional silos

Respondents point to two clear priorities for ERM from a people and culture perspective: aligning incentives and behaviors; and engaging the front office in risk management (see Figure 4). These two priorities are clearly linked, as firms, especially in the financial sector, attempt to introduce risk-based decision-making and risk-adjusted performance metrics.

More and more firms are seeking to improve the alignment of front-office incentives with the overall goals of the organization by putting in place structures that bring the front office, risk function, and senior management closer together. Firms are searching for initiatives that can increase risk-aware behavior, improve conduct, and try to make decision-making more risk-based.

Figure 4: People and culture ERM challenges

What do you see as your organization's main ERM challenges relating to people and culture? [Score from 1-5, 1= Not a challenge and 5= Significant challenge]



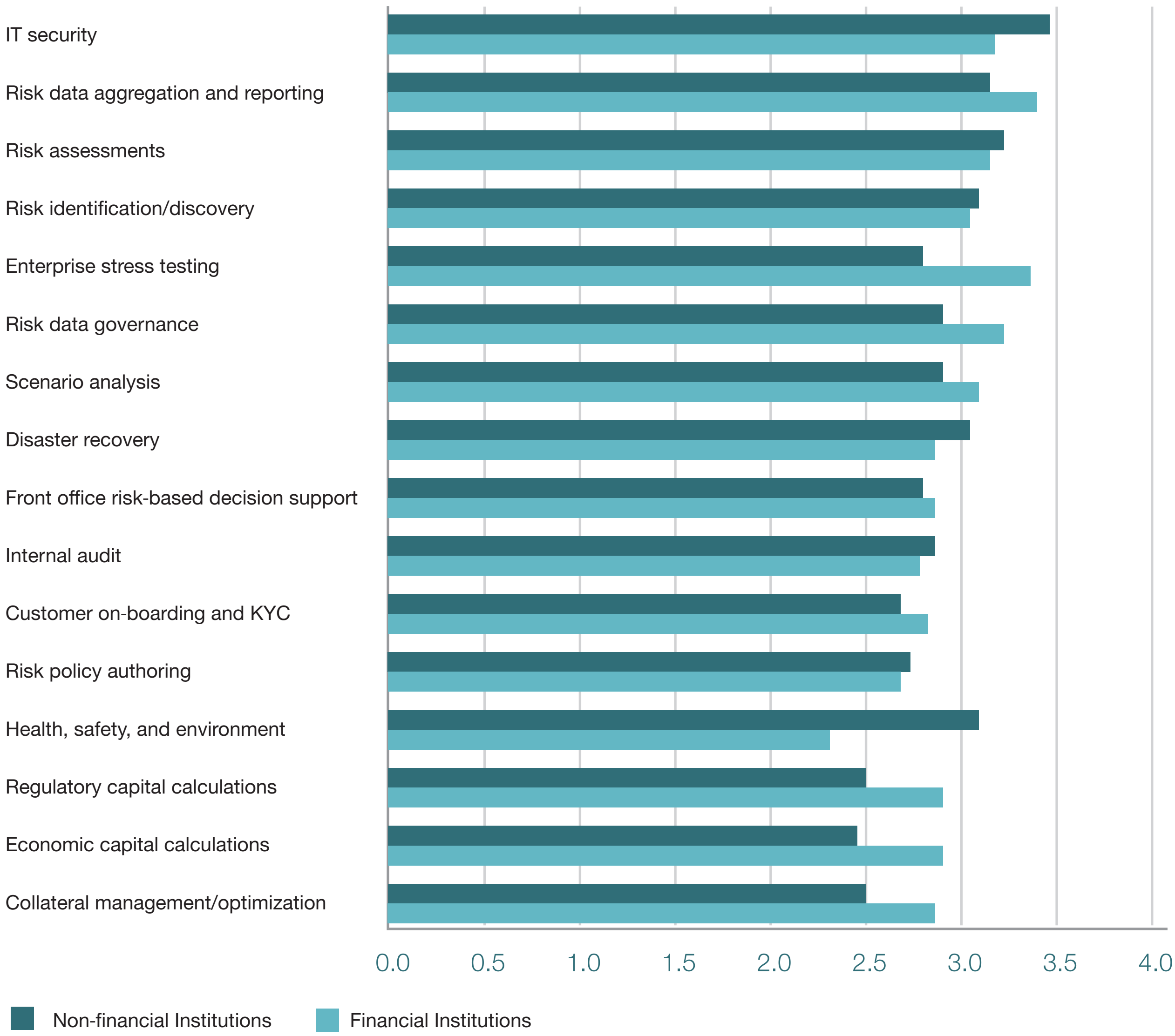
The paradox of technology – An enabler for risk management and source of risk

Technology is a key enabler of ERM. By improving risk data aggregation and reporting, and risk data governance, companies are better able to have an enterprise-wide view and make information available for risk-based decision-making. The challenge for firms is to implement new technologies and systems without creating new risks.

As Figure 5 shows, technology is a source of risk, as well as an enabler of ERM. Respondents rank IT security as the number one priority for improvement, above risk data aggregation and reporting and risk assessments. As more business goes online, and as the volume, variety and velocity of data increases, issues such as data quality and cyber-security are becoming increasingly important.

Figure 5: Prioritization of risk management activities

Please score the following risk management activities in terms of priority for improvement within your organization [score from 1-5, 1= Low priority and 5= High priority]



Convergence of qualitative risk governance and quantitative risk measurement processes

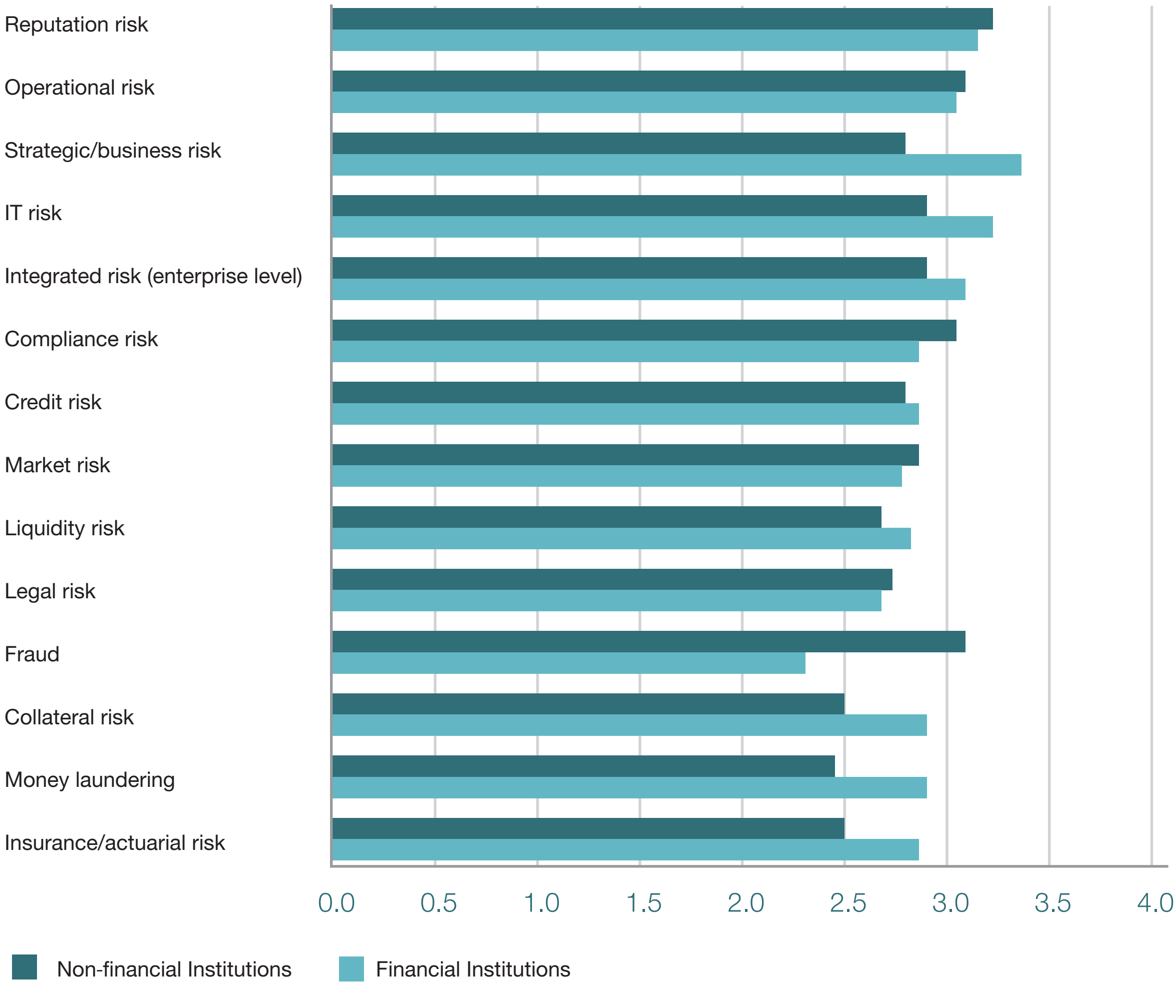
As Figure 6 shows, there are five risk types that respondents consider almost equally as top priorities: IT risk; operational risk; integrated/enterprise risk; strategic/business risk; and reputation risk. Credit risk was also ranked highly by respondents from financial institutions. The emphasis on these risk types suggests that companies recognize the need for greater convergence between quantitative and qualitative risk management activities. Qualitative risks, such as business risk and reputation risk, are now becoming as important as financial risks, such as credit risk and market risk.

Previously, many firms carried out quantitative and qualitative approaches in silos. Now, however, there is a growing need for change. Firms are under pressure to cut costs and improve the quality of risk management.

They also face more stringent regulatory requirements, particularly in the financial sector. Regulators are requiring closer supervision of model risk management, and are scrutinizing failures from operational risk more closely. Financial institutions also need greater convergence to undertake activities such as stress testing. To improve the measurement of risks such as operational risk, IT risks and reputation risk, firms need to bring qualitative and quantitative inputs together. This will require greater alignment between people, processes, and systems.

Figure 6: Prioritization of risk types

Please score the following risk types in terms of priority for improvement within your organization [score from 1-5, 1= Low priority and 5= High priority]



There is a need for ERM to move from the conceptual to the practical

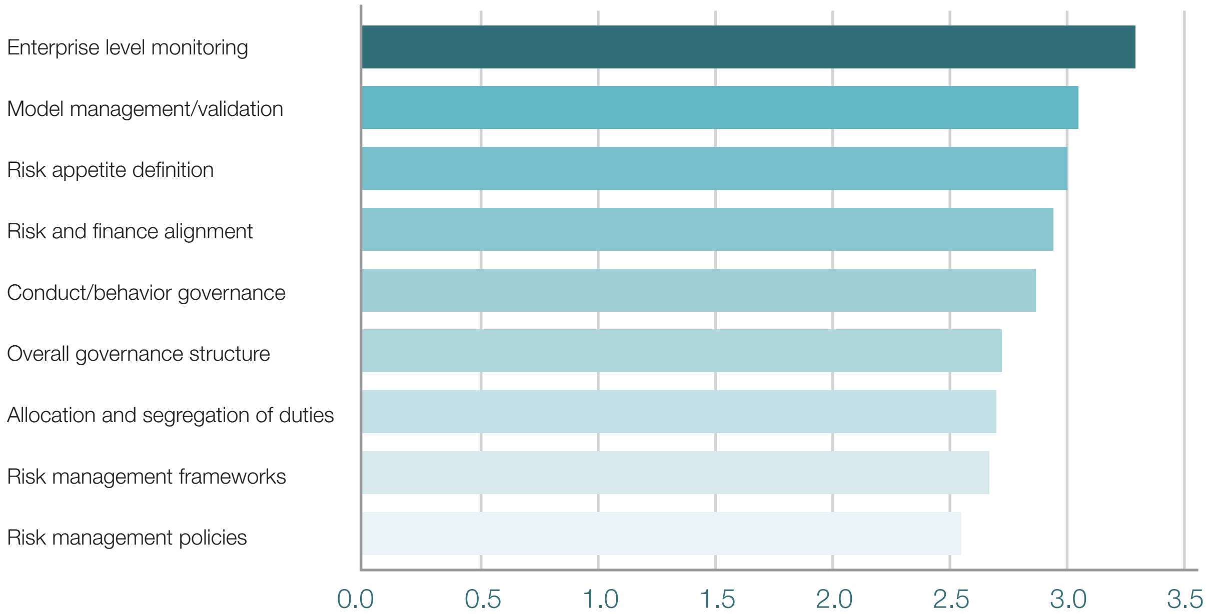
Research by Chartis shows that there is a shift away from conceptual considerations of ERM to the practical requirements for implementation. As many of our interviewees told us, companies are now more concerned about how to achieve their goals, rather than figuring out what needs to be done. For the most part, they understand what is required.

Achieving key ERM objectives – across organizational structures, people and culture, and IT systems – remains challenging. Many firms simply lack the budget, resources, and time to implement major projects. As a result, they have to select their priorities carefully to make sure they can meet their objectives and deliver tangible benefits.

Companies in our survey highlight a number of challenges that are preventing them from achieving a more effective ERM program. Key issues, according to respondents, are enterprise level monitoring, model management, defining the risk appetite, and aligning risk and finance (see Figure 7).

Figure 7: Organizational structure and process challenges

What do you see as your organization's main ERM challenges relating to organizational structure and processes? [Score from 1-5, 1= Not a challenge and 5= Significant challenge]



A key learning from the follow up interviews has been that firms with more advanced ERM programs have often used specific enterprise-wide initiatives to drive the transformation towards a risk-enabled enterprise. Furthermore, for an initiative to have a real impact on risk transformation it needs to have one or more of the following characteristics:

1- Supported by national and international regulatory requirements with specific timelines. This ensures that there are specific budgets, resources, and timelines dedicated to achievement of risk management goals;

2 - Successful implementation requires change throughout the enterprise with multiple impact points across all three lines of defense (i.e. front-office, risk functions, and independent assurance);

3 - There is a clear business case for implementation in terms of tangible financial and reputational benefits. Including but not limited to loss reduction, capital efficiency, enhanced relationships with customers and regulators, and risk-based decision making.

These characteristics make an initiative "strategic" and transformational. With the right budget and resources behind them, these initiatives can act as catalysts to move firms toward The Risk Enabled Enterprise® over the next two to three years. Our research has shown that the following initiatives can exhibit the above characteristics and can act as strategic enablers:

- Model risk management
- Conduct risk
- Enterprise-level stress testing
- Risk-based performance management

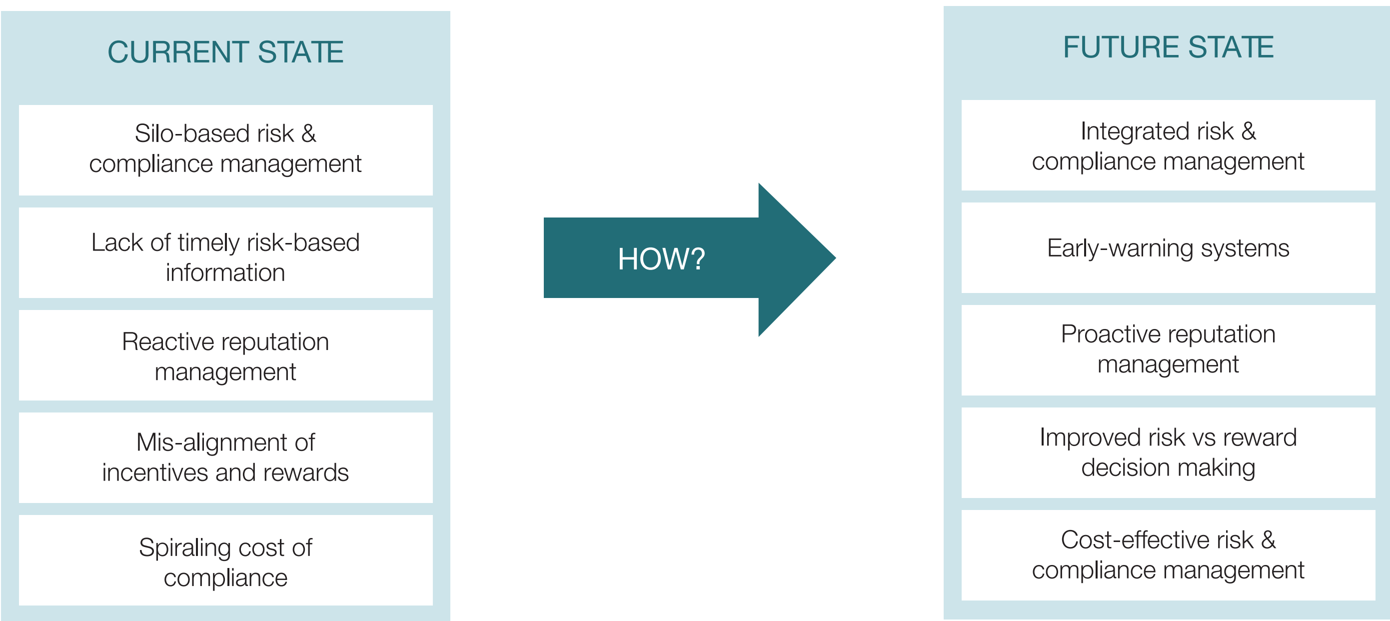
4 Two-year research agenda and roadmap

Most companies know what they would like to achieve in order to become a risk-enabled enterprise. As Figure 8 shows, they agree on the challenges associated with their current state, and understand what a future state should resemble. In particular:

- Firms know silo-based risk management prevents an enterprise view of risk and is itself a source of risk.They want integrated risk management and integrated risk and finance, leading to risk-based performance management.
- They agree that they lack timely risk-based information and are aware that traditional and static risk management methods and tools cannot keep up with the modern dynamic and complex world of risk. Instead, they want to put in place early warning systems and move towards risk management on demand.
- They recognize that incentives and rewards are frequently misaligned and see the need to improve risk-awareness and make risk metrics a key part of day-to-day decision making.
- They need to replace the post-event, reactive mentality towards managing reputation with a more proactive approach, incorporating predictive insights to prevent loss events.
- They know that regulatory costs are spiraling, and want to be able to ensure compliance, while keeping costs down.

However, while firms agree that they need to shift from this current to future state, very few are confident that they know HOW to achieve that transformation.

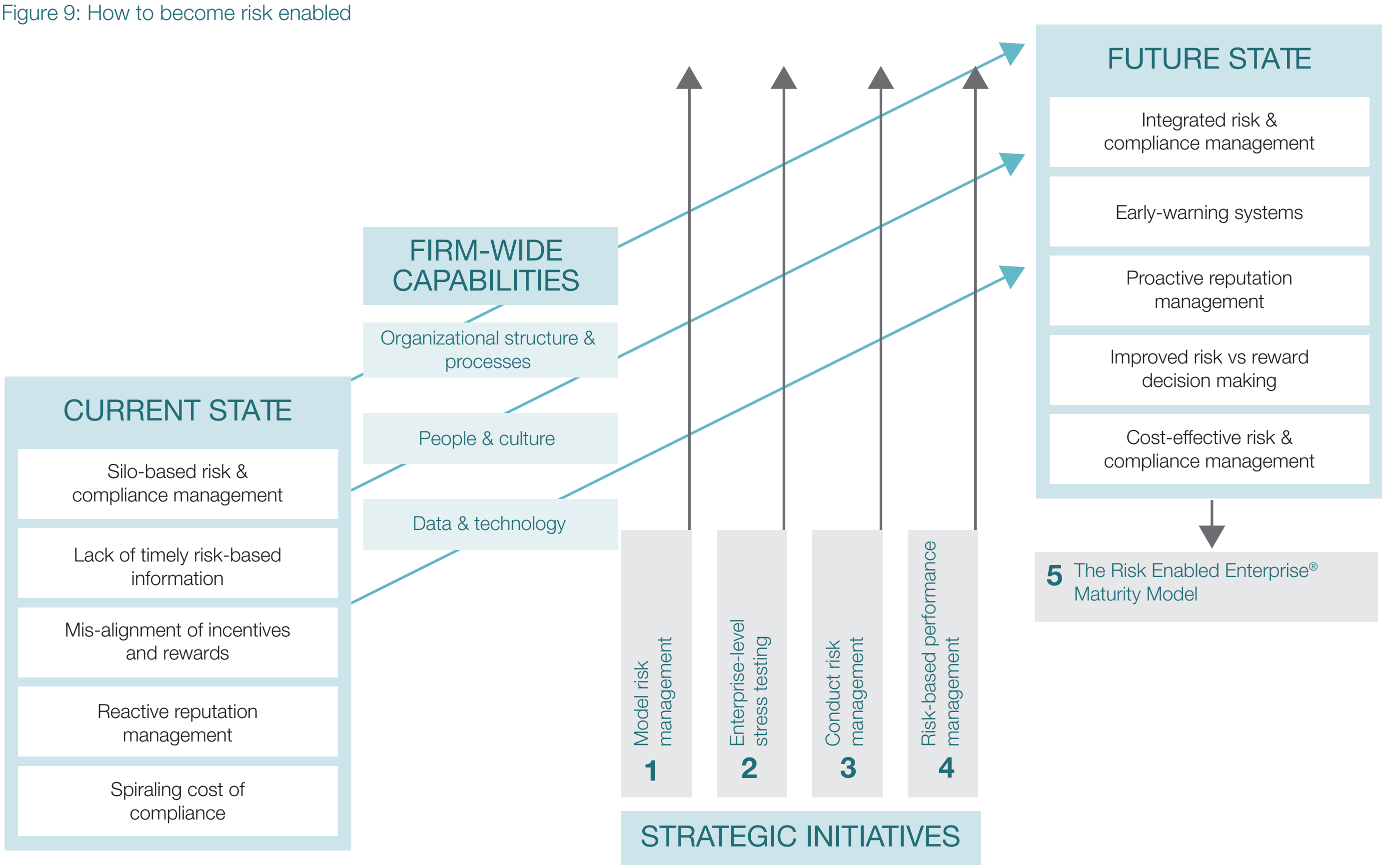
Figure 8: Current state to future state



A key challenge is over-ambition. Too many firms try to make this transformation all at once with plans that are too broad and vague to succeed. At the other end of the spectrum, some firms fail to embark on the transformation at all because they are put off by the size and complexity of such a major, firm-wide program.

To achieve a successful transformation, companies need to put in place a realistic roadmap that uses a series of initiatives to take relatively small and controlled steps towards becoming a risk-enabled enterprise. These initiatives will need to be part of a wider overall plan to improve enterprise-wide capabilities. Figure 9 shows how firms can develop this roadmap.

Figure 9: How to become risk enabled



As the diagram demonstrates, the transformation to becoming a risk-enabled enterprise requires the development of capabilities throughout the firm. Risk management is not just a technology, culture, or organizational issue – it encompasses all three. Chartis's research has found that, to move from their current state to the desired future state, firms will need the following "capability building blocks":

- Organizational structure and processes – With an appropriate organizational structure and processes in place, different areas and functions of the firm can work together effectively. Communication and co-operation between the three lines of defense (front office, risk function, audit) is especially important to ensure the swift escalation of warnings and quick dissemination of instructions. Equally, the organizational structure and processes must enable senior management to make decisions and view risk management across the enterprise. This will enable them to set the firm's risk appetite effectively. Finally, the risk function and, in particular, risk governance, need to have a central role and a position within the firm that gives them authority and independence.

- Appropriate people and culture – Firms need to ensure that their staff are well-trained and appropriately motivated. In part, this means that the correct incentives must be in place to encourage risk-based behavior, but it also means ensuring that staff across the organization are aware of their responsibilities and their accountability for particular risks. Firms also need to ensure that front office staff, as well as those in the risk function, are kept up to date on regulatory and compliance requirements.
- Quality data and effective and efficient technology – Firms need technology systems that supply accurate and timely information to everyone across the enterprise. At the same time, technology can also be a source of risk. This needs to be managed proactively.

Embedding these capabilities throughout the organization will, however, be challenging. Equally, while these capabilities can be measured and evaluated within the firm using clear metrics, plans to introduce them can often be nebulous in nature and difficult to track. This can lead to silo-based initiatives and, as a result, they are rarely implemented successfully.

To embed these capabilities and facilitate the process of becoming risk-enabled, firms need practical initiatives and programs that can yield tangible benefits. This type of initiative can get buy-in from different areas of the firm, will be an urgent priority, and have clear goals and benefits, making success more likely.

Strategic initiatives

Within these three capabilities, companies need to embark on a set of strategic initiatives that will provide the platform and urgency over the next three to five years to move from current state to the risk-enabled enterprise. Chartis believes that firms should prioritize the following strategic firm-wide initiatives, because:

- They are likely to have the most positive impact on ERM effectiveness across organizational structure and processes, people and culture, and data and technology
- They will require change throughout the enterprise and across all three lines of defense
- They have clear goals and financial and reputational benefits that will allow a business case to be made and make completion of the initiative a priority.

Model risk management

Model risk is the risk that arises from the inaccuracy or misuse of the models that a firm uses to estimate risk or other financial measurements. As models have multiplied in quantity and complexity, this has become an increasing priority for many companies. Several high-profile losses in the financial sector have also raised the levels of concern.

Effective model risk management can act as an enabler of ERM by achieving the following:

- Bringing quantitative and qualitative people, processes, and systems together
- Improving organizational structures and processes by introducing clearer hierarchies and escalation processes across all three lines of defense
- Strengthening risk culture by making front office staff responsible for their use of models and by encouraging greater communication between model development activities and the overall risk appetite set at board level
- Ensuring high quality risk data aggregation and reporting across the enterprise.

Enterprise-level stress testing

Regulations, such as Basel 3 and CCAR, require firms to undertake enterprise stress tests. To be effective, enterprise-level stress testing requires trusted data and robust technology across the three lines of defense. As enterprise stress testing inherently involves the collection of information from different lines of business, functions, and departments, it can serve as an enabler of effective ERM by:

- Breaking down silos and building links between functions
- Evaluating capital management and performance at an enterprise level
- Guiding strategic decision-making

Conduct risk

Conduct risk is the risk that a firm will create unfair or detrimental outcomes for its customers, clients, or counterparties as a result of its behavior in the execution of its business activities. It is now high on the agenda for many financial institutions, partly as a result of high-profile failures, including the fixing of LIBOR by staff at a number of banks and brokers, and the mis-selling of financial products in several international jurisdictions. Conduct risk can lead to regulatory fines, loss of future business, and reputational damage.

As well as being an important goal in itself, the effective management of conduct risk can also help to strengthen ERM by:

- Creating broader risk awareness throughout the organization
- Improving workflow and monitoring technology
- Encouraging firms to put in place more robust training programs and risk culture
- Requiring the implementation of stronger supervision and risk escalation structures

Risk-based performance management

Risk-based performance management encompasses metrics relating to individual staff and lines of business, as well as enterprise-wide measurements, such as RAROC. It brings together a number of key elements at an enterprise level, including dynamic risk-based balance sheet management, capital efficiency, risk-based pricing and decision-making, collateral optimization, and enterprise risk appetite monitoring.

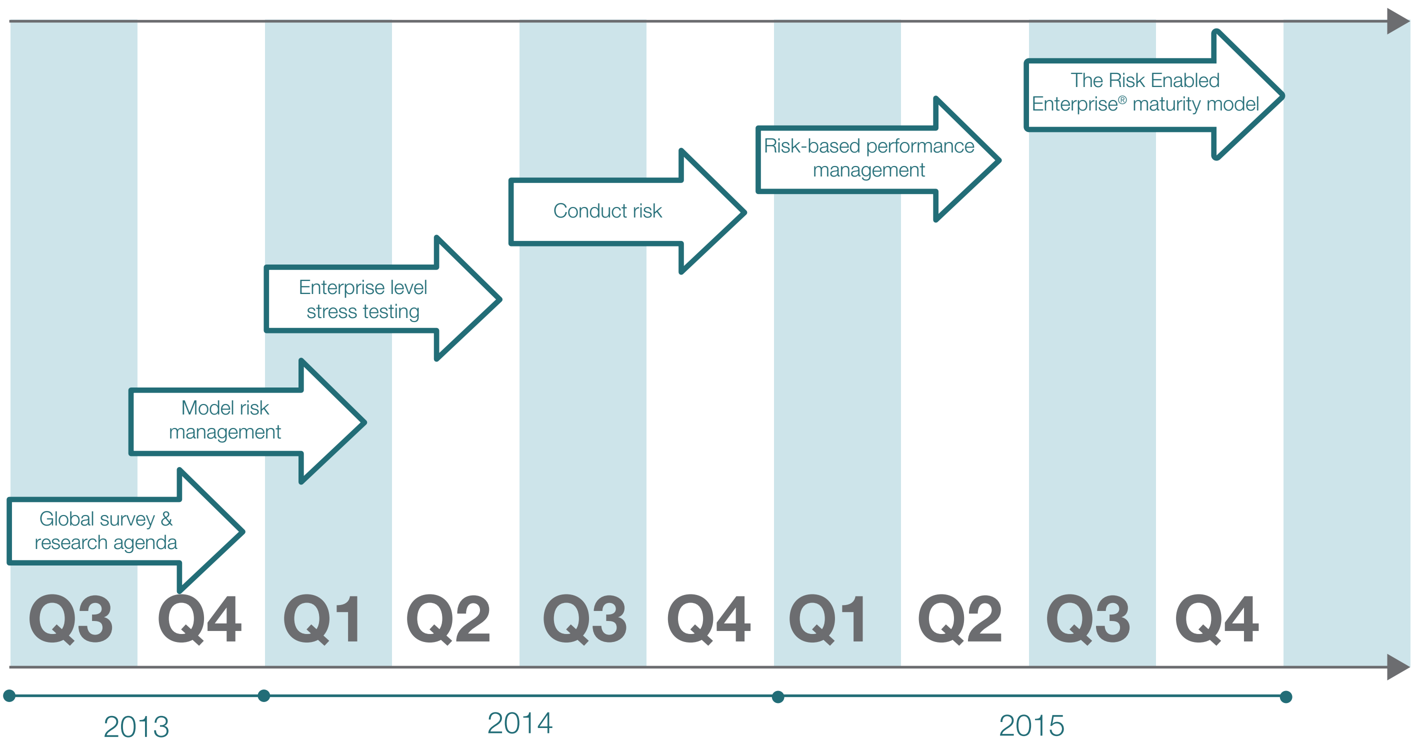
Effective performance management can help firms to strengthen ERM by:

- Improving their view of their overall position, the success of particular business lines, and the actions they should take
- Making compensation and strategic decision-making more robust and risk-aware
- Enabling alignment between risk and finance because risk-based performance measurement requires input from these different functions
- Facilitating the integration of data aggregation and reporting systems
- Improving communication between the risk function, the front office, and senior management

Research roadmap

Over the next two years, Chartis will carry out research into best practices relating to these initiatives, as well as how they facilitate the transformation into a risk-enabled enterprise. The roadmap for The Risk Enabled Enterprise® research initiative is illustrated below in Figure 10. Chartis will conclude this research program by developing a comprehensive "maturity model" for the risk-enabled enterprise. The maturity model will encapsulate critical success factors, best practices, and capabilities. It will provide firms with a practical blueprint for enterprise risk management and an independent benchmark for self-assessment.

Figure 10: The Risk Enabled Enterprise® research roadmap



5 Appendix A: Survey demographics

Figure 11: Respondents by job function

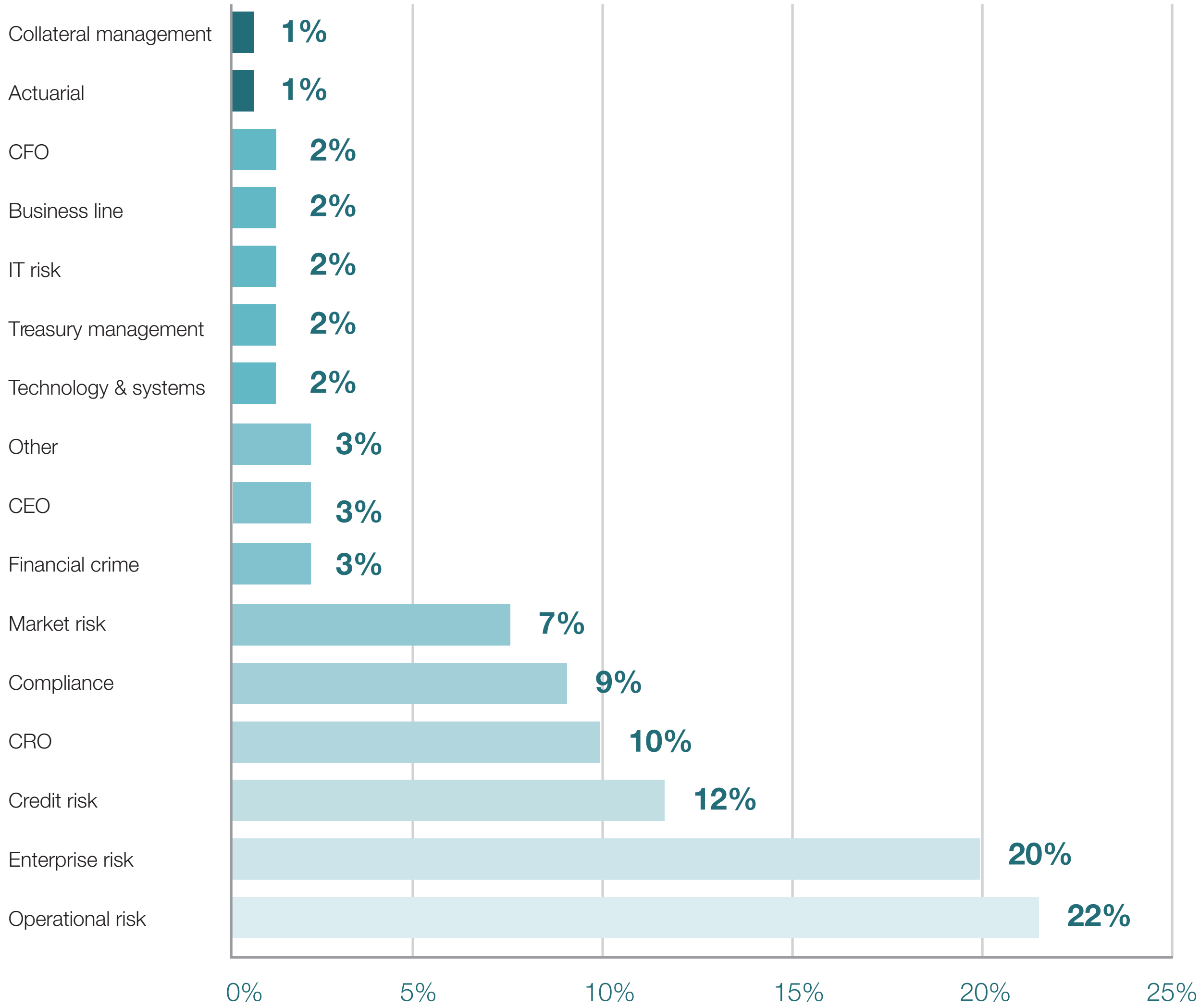


Figure 12: Primary business lines of respondents

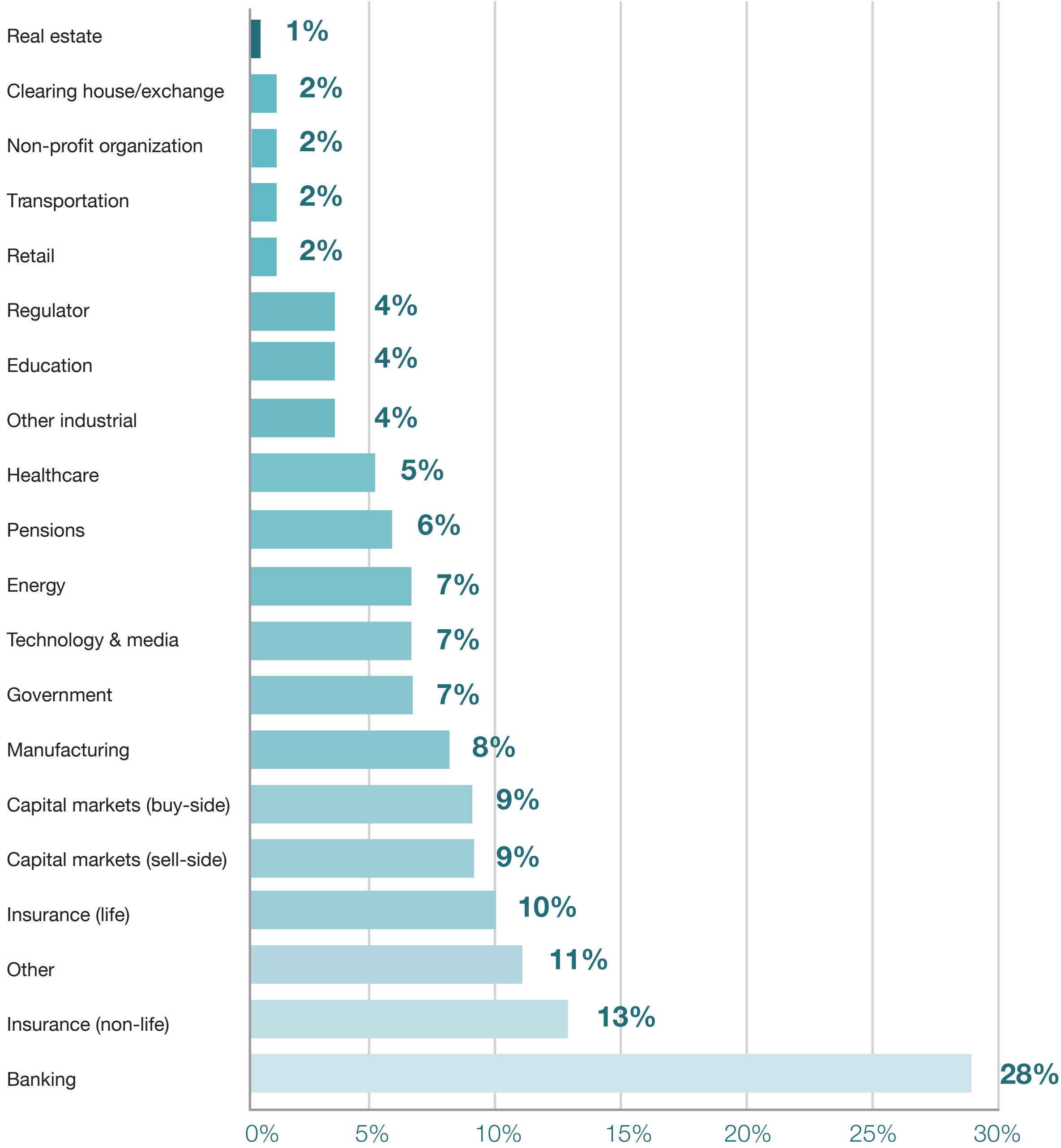


Figure 13: Size of respondents' organizations by revenues

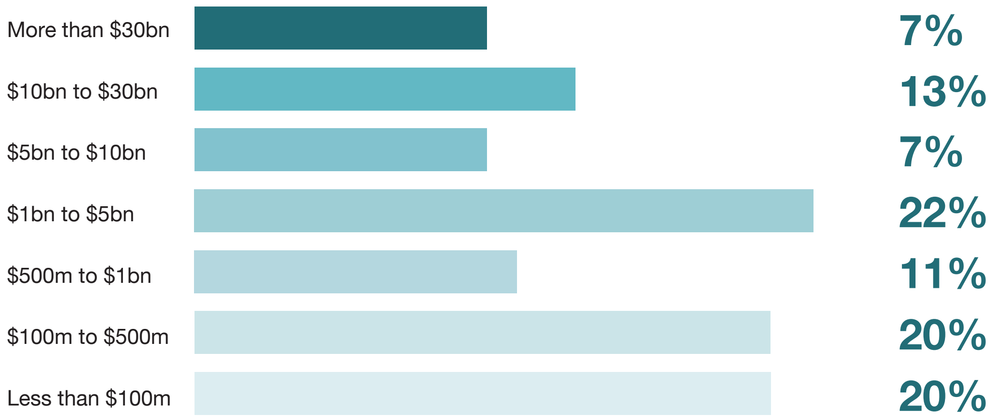
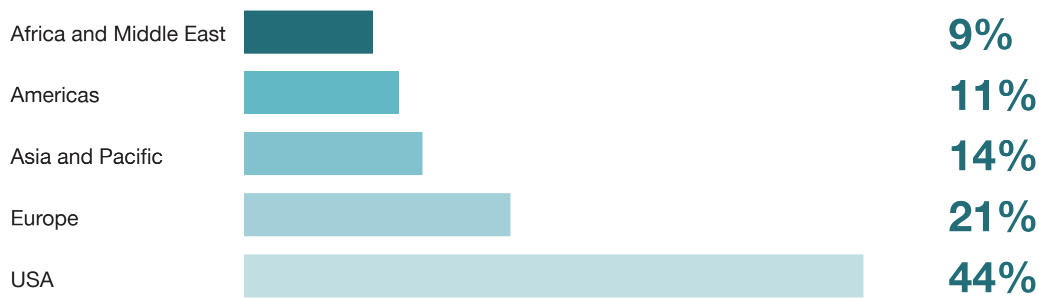


Figure 14: Size of respondents' organizations by employees

Figure 15: Location of respondents



6 Appendix B: Survey results

Figure 16: Approach to ERM

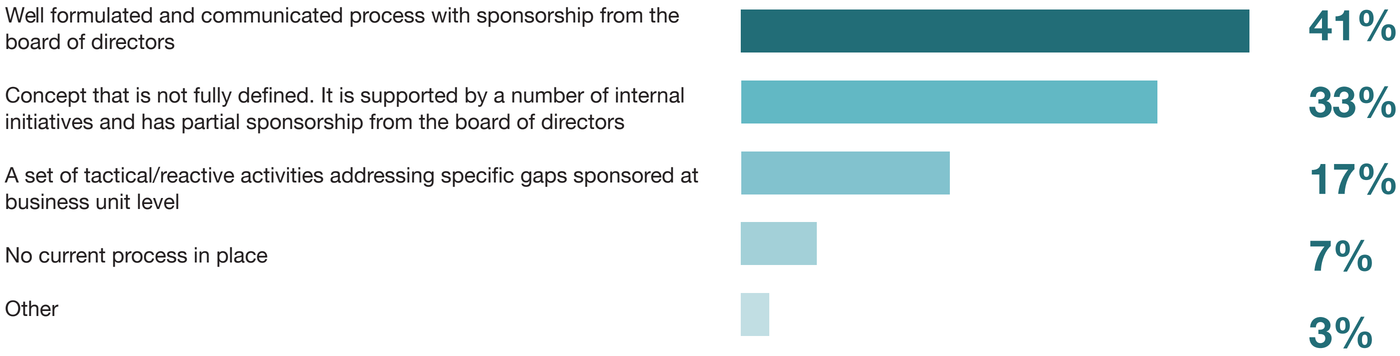


Figure 17: Balancing demands of regulatory compliance and risk management

Figure 18: ERM priorities

In terms of ERM, what are your organization's priorities for 2013-14?
[Score from 1-5, 1= Low priority and 5= High priority]

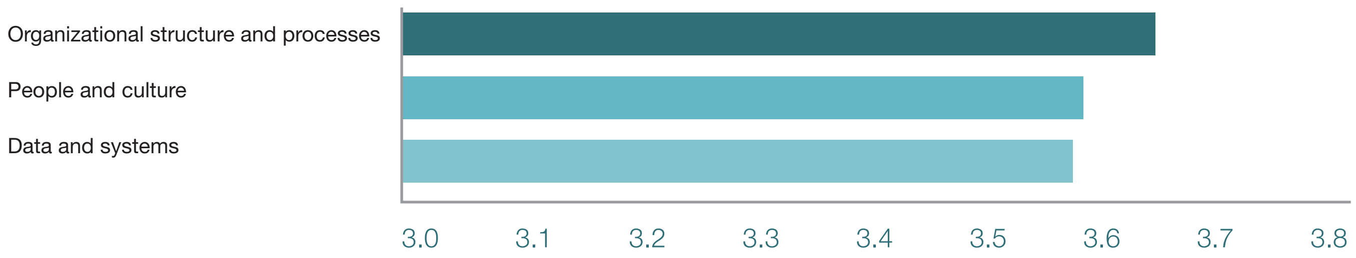


Figure 19: Organizational structure and process challenges

What do you see as your organization's main ERM challenges relating to organizational structure and processes? [Score from 1-5, 1= Not a challenge and 5= Significant challenge]

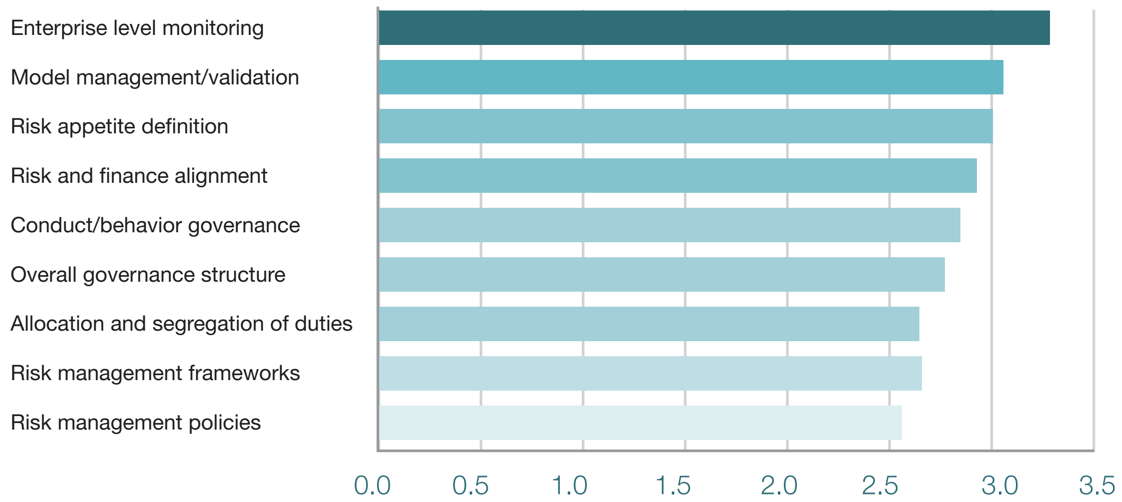


Figure 20: Data and systems challenges

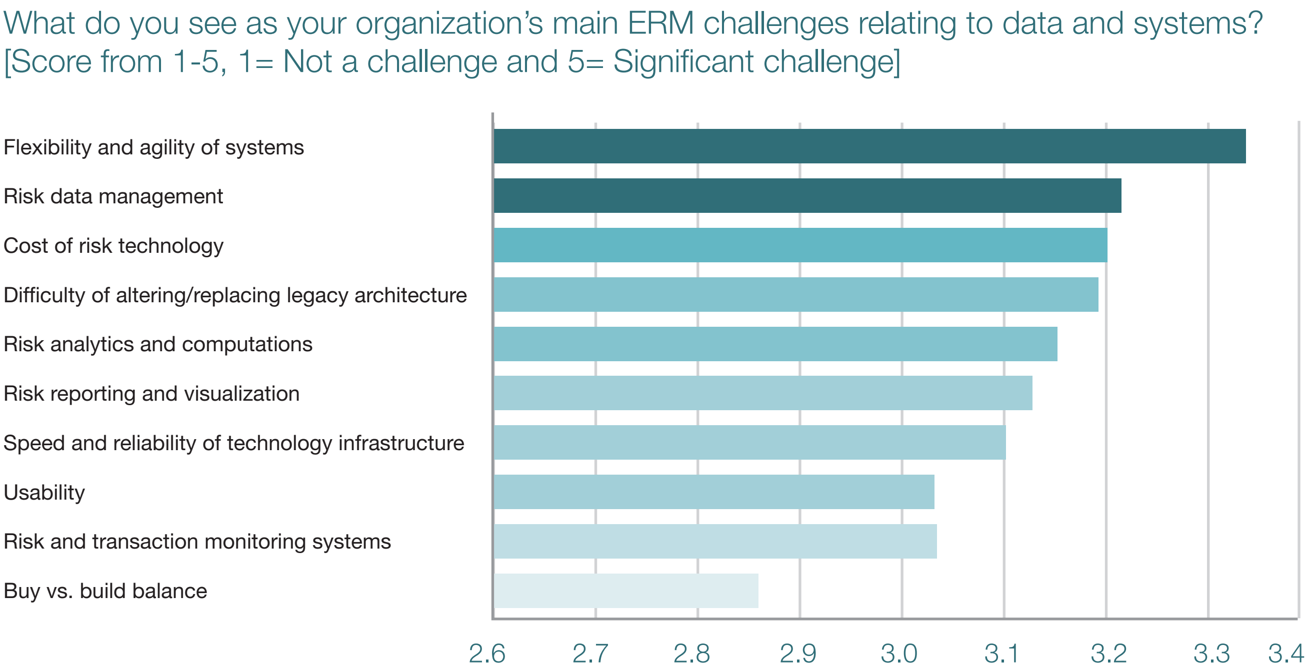


Figure 21: People and culture challenges

Figure 22: Scoring of risk types

Please score the following risk types in terms of priority for improvement within your organization [score from 1-5, 1= Low priority and 5= High priority]

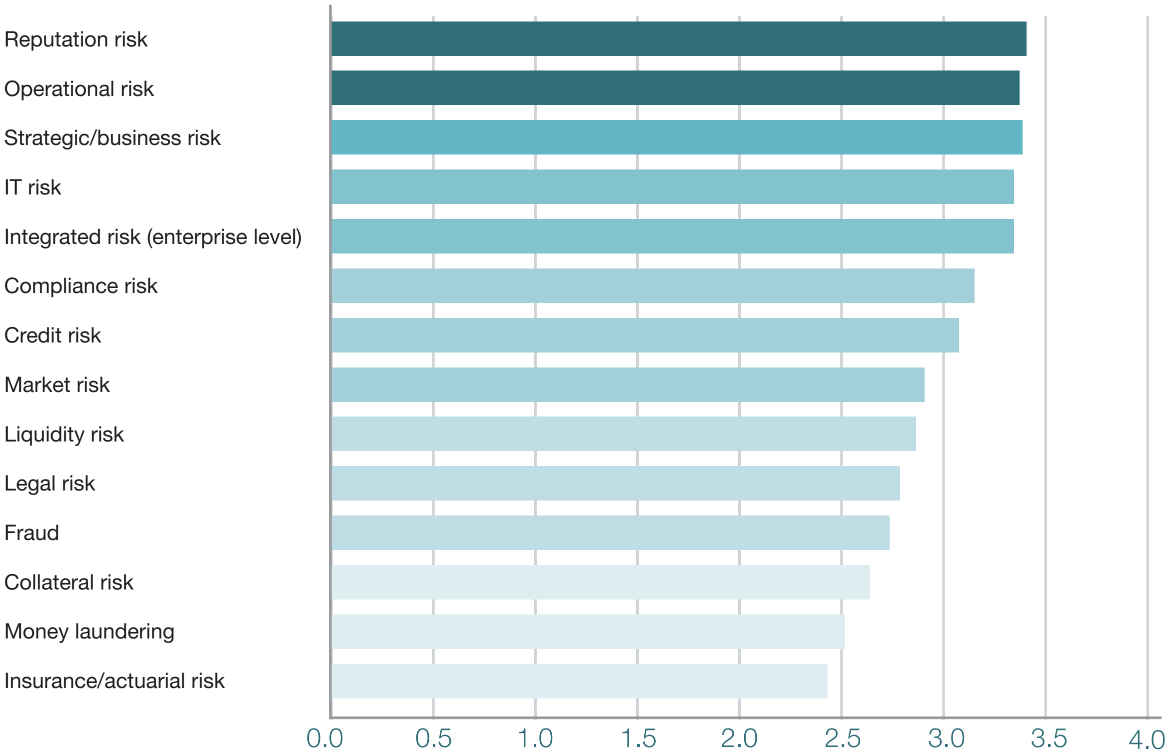


Figure 23: Risk management activities for improvement

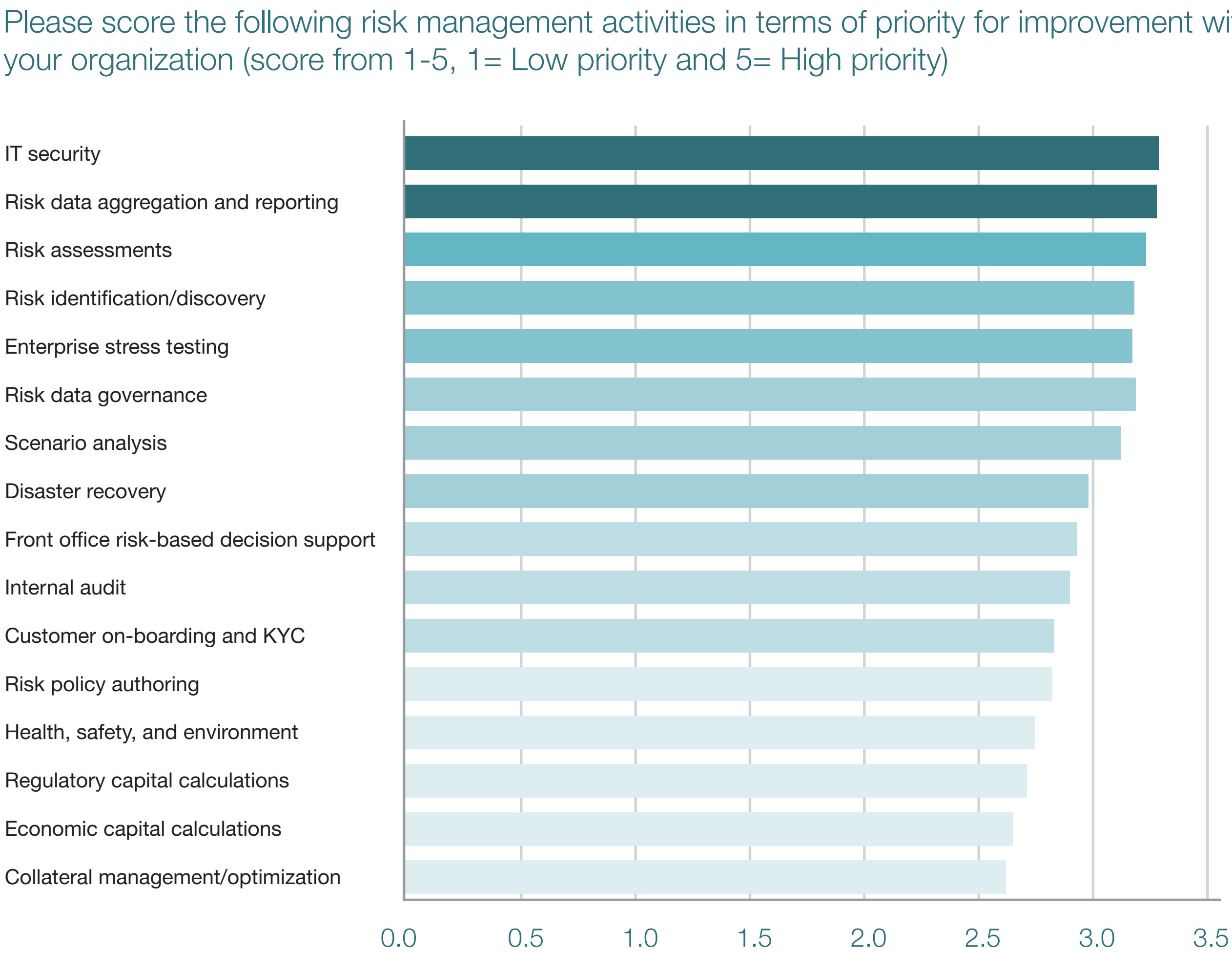
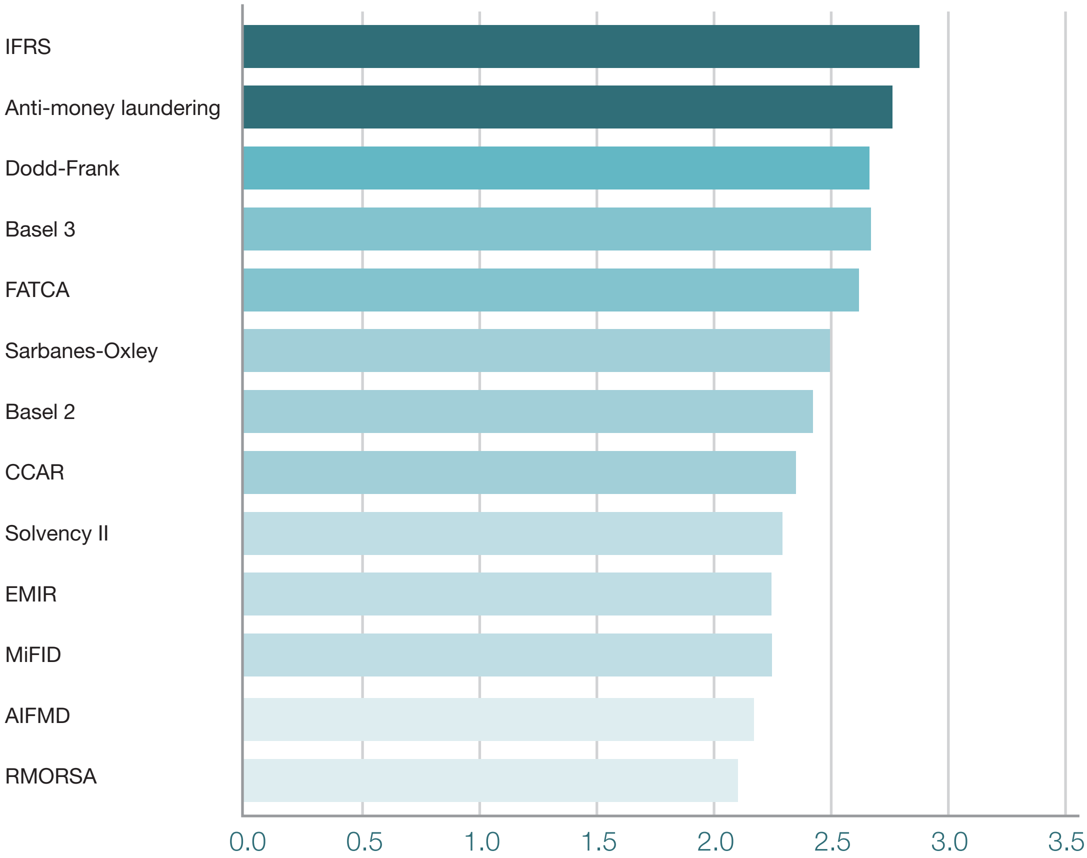


Figure 24: Risk-based regulations

Please score the following risk-based regulations in terms of priority for your organization (score from 1-5, 1= Low priority and 5= High priority)



7 How to use research and services from Chartis

In addition to our flagship industry reports, Chartis also offers customized information and consulting services.

Our in-depth knowledge of the risk technology market and best-practice allows us to provide high quality and cost-effective advice to our clients. If you found this report informative and useful, you may be interested in the following services from Chartis.

For risk technology buyers

If you are purchasing risk management software, Chartis's vendor selection service is designed to help you find the most appropriate risk technology solution for your needs.

We monitor the market to identify the strengths and weaknesses of the different risk technology solutions, and track the post-sales performance of companies selling and implementing these systems. Our market intelligence includes key decision criteria such as TCO (total cost of ownership) comparisons and customer satisfaction ratings. Our research and advisory services cover a range of risk and compliance management topics such as credit risk, market risk, operational risk, GRC, financial crime, liquidity risk, asset and liability management, collateral management, regulatory compliance, risk data aggregation, risk analytics and risk BI.

Our vendor selection services include:

- Buy vs. Build decision support
- Business and functional requirements gathering
- Identification of suitable risk and compliance implementation partners
- Review of vendor proposals
- Assessment of vendor presentations and demonstrations
- Definition and execution of Proof-of-Concept (PoC) projects
- Due diligence activities

For risk technology vendors

Strategy
Chartis can provide specific strategy advice for risk technology vendors and innovators, with a special focus on growth strategy, product direction, go-to-market plans, and more.

Some of our specific offerings include:

- Market analysis, including market segmentation, market demands, buyer needs, and competitive forces
- Strategy sessions focused on aligning product and company direction based upon analyst data, research, and market intelligence
- Advice on go-to-market positioning, messaging, and lead generation
- Advice on pricing strategy, alliance strategy, and licensing/pricing models

Thought Leadership
Risk technology vendors can also engage Chartis to provide thought leadership on industry trends in the form of in-person speeches and webinars, as well as custom research and thought-leadership reports. Target audiences and objectives range from internal teams to customer and user conferences.

Some recent examples include:

- Participation on a "Panel of Experts" at global user conference for leading ERM (Enterprise Risk Management) software vendor.
- Custom research and thought-leadership paper on Basel 3 and implications for risk technology
- Webinar on Financial Crime Risk Management
- Internal education of sales team on key regulatory and business trends and engaging C-level decision makers

Visit: www.chartis-research.com for more information.

8 Further reading

- RiskTech100® 2014
- Global Risk IT Expenditure 2014-15
- Operational Risk Management Solutions for Financial Services 2013
- Enterprise Fraud Management Solutions for Financial Services 2013
- Basel 3 Technology Solutions 2013
- Solvency 2 Technology Solutions 2013
- Energy Trading Risk Management 2013
- Enterprise GRC Systems 2012

For all of these reports see: www.chartis-research.com