

# Emerging Risks: Anticipating Threats and Opportunities Around the Corner





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#### **REPORT ANALYSIS AND REVIEW**

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### INTRODUCTION

It's not easy to see around corners, but increasingly that's a requirement corporate executives and boards are placing on the risk management function. On most days, risk professionals are expected to help manage "known" risks, construct risk finance programs, and to generally advise senior leaders regarding the ongoing risks of the business. But some days are different.

There are times when something out of the ordinary occurs, when a new risk emerges: A country half a world away nationalizes a critical commodity, or a once-innocuous virus suddenly spreads among people, or a competitor's innovation threatens your key product. How such events manifest varies by organization, by industry, and by region.

As we noted in the 2015 *Excellence in Risk Management* study, risk executives understand that there is a lot of work to be done to reconcile a crucial gap: Boards of directors want to know what risks are looming on the path ahead, and yet only 27% of our 2015 survey respondents said that identifying emerging risks was a priority. For some companies, a lack of focus on emerging risks will bring financial difficulty; for those with foresight, they will bring opportunity.

That theme was borne out in our 2016 survey and in complementary focus group discussions with risk professionals. "New technology, new regulations, new court cases, there's a lot going on in our industry that could change the landscape overnight for any of our businesses," the vice president of risk management at a major communications organization told us.

In the 2016 study, we take a deeper look into the topic of emerging risks. Who are organizations turning to in order to identify the risks that lay ahead? What tools are risk professionals using? Why do some organizations continue to see barriers to understanding the impacts of emerging risks? Where are companies investing their finite resources?

# DEFINING AND IDENTIFYING EMERGING RISKS

We were interested in how our participants defined emerging risks, and in trying to tease out a consensus definition it became clear: There is no clear definition of emerging risks.

- For some, emerging risks are those that leadership calls out: "When I get a call from the chief operating officer who is over our entire university system it is usually in reference to an article he just read in *The Wall Street Journal*, which triggers his concern about our position on that issue," the executive director of risk management for a large university system said. "And if that becomes their issue, then the resources on campus are made available to help."
- How widespread a risk is determines for some if it is emerging. They turn for guidance to reports such as the World Economic Forum's (WEF) Global Risks Report 2016.
- For others, the key is the "velocity of risk," or how fast the risk is approaching and when it will have an impact.
- And there are those who see them as inevitable surprises.
   "Emerging risks are things that you can't necessarily

prevent," said the director of risk management at a real estate investment firm.

 And finally — with cyber risk as a leading example — a risk can be long established, but if it is still evolving, many will consider it to be emerging. "It's a constant ongoing war that you're waging," the vice president of risk management at a multinational retailer said about cyber risk.

The conversations were summarized by the director of risk management at a pharmaceuticals firm: "The standards haven't been set yet for defining emerging risks."

# Global and Emerging Risks – Definition and Characteristics

As organizations increase the time and attention given to emerging risks, it will be helpful to find a generally accepted definition of the term. Following is one such definition from the RIMS Strategic Risk Management Implementation Guide:

Emerging risk is a novel manifestation of risk or type that has not been experienced previously. To differentiate between emerging risks and those risks that may be evolving, RIMS uses the term dynamic risks, which are risks that are known to exist, but may change over time.

Another explanation from the Marsh & McLennan Companies Global Risk Center is helpful in discussing emerging risks:

Global and emerging risks are complex, usually exogenous, threats and uncertainties that may have significant, unexpected impacts on company earnings and market positioning. As new phenomena or familiar challenges sharply aggravated by changing conditions, they often take shape at the intersection of several fundamental trends and can crystallize with sudden shifts in velocity.

Trajectories of these risks are hard to predict due to extensive interdependencies with other issues and complex interactions with risk-absorbing systems. This engenders the possibility of rapid dissipation, non-linear surprises, and spillover effects that cross geographic, sector, and other boundaries. For some such risks, there is no guarantee of a return to prior conditions and the result is the emergence of a new status quo. By and large, companies (individually or collectively) are not able control such risks; they can only mitigate their exposures.

# WHERE ARE CRITICAL RISKS EMERGING FROM?

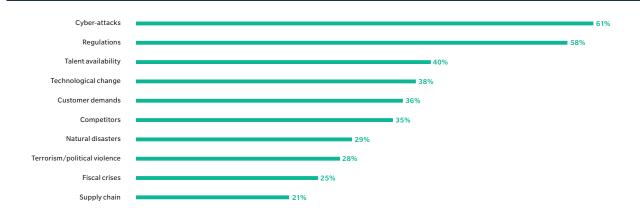
One way to gauge organizational thinking about emerging risks is to ask from what areas their critical risks are likely to emerge, and in what time frame they expect those risks to have an impact (see Figure 1).

We identified three broad categories for these risks:

#### THE HERE AND NOW

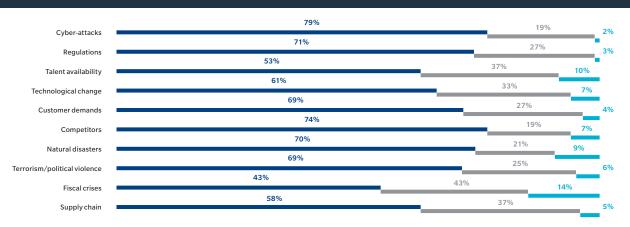
These are critical, dynamic risks that are already a significant concern to the organization. The two areas that respondents were most likely to cite as the potential source of emerging critical risks were cyber-attacks





#### FIGURE 1b Time Frame of Critical Risks

Please state the time frame in which you think the next critical risks will impact your organization.



- IS ALREADY A SIGNIFICANT CONCERN
- WILL BE A SIGNIFICANT CONCERN IN ONE TO THREE YEARS
- WILL BE A SIGNIFICANT CONCERN IN MORE THAN THREE YEARS

and regulations. And among those who picked them, there was wide agreement that they are already of concern.

- Cyber-attacks: How is it that an issue that has been a top-10 risk in dozens of surveys over the past five-plus years is still viewed as emerging? One reason is that although the term cyber-attack is embedded in the lexicon, the nature of attacks continues to evolve. "We don't have that much personal protected data... but the control systems around our manufacturing operations are probably more problematic for us," said the director of risk management for a global manufacturer. And it's only in the past year or so that cyberthreat actors have more actively targeted such control systems. As a result, a new realization has arisen, and cybersecurity is now a top enterprise concern. Much of the attention around cyber risk now starts at the executive level. and thus commands attention. It has become apparent that to manage this risk at the enterprise level it cannot be delegated to the information technology (IT) group - every leader, indeed just about every employee, has a stake in managing cyber risk.
- Regulations: Constantly shifting in the US and globally, the regulatory environment impacts operations and strategy and can lead to significant expenses around compliance and litigation. "We spend a lot of time educating people on what we feel they should be concerned about," said the risk manager for a transportation and logistics company. For risk executives,

they are balancing the pressures to be ever more compliant with insurance and tax standards against the reality of multiple geographic interpretations of a single standard.

At the time of our survey, respondents may have been thinking ahead to uncertainty around upcoming events such as presidential elections in the US and elsewhere; changes in global regulatory structure(s), such as the potential British exit from the European Union; and ongoing changes within their industries. For example, financial institutions continue to adjust to rules and procedures imposed several years ago by Basel III and the Sarbanes-Oxley and Dodd-Frank acts. And cybersecurity will remain a priority for regulators, impacting such industries as communications, media, technology, health care, and retail.

#### AROUND THE CORNER

Respondents started to shift their outlook to a longer term — one to three years away — when considering such risks as talent availability, fiscal crises, social instability, and sustainability demands.

- Talent availability: The imminent retirement of risk and other professionals was behind the 41% of respondents citing talent availability as an area from which their next critical risk will emerge. Just over a third of those who cited this as a critical risk said it would be so in one to three years.
- Fiscal crises, sustainability demands, and social instability: Although these areas did not draw a high number of overall

responses, those that did cite them were likely to see them as risks that would be of significant concern in the one to three year range. From an emerging risk standpoint, these can represent areas that may not yet have grabbed much attention in an organization, meaning the risk professional who raises them can be contributing heavily to forward-thinking business strategy.

#### ON THE HORIZON

These are complex and often broad threats and uncertainties that can have unexpected adverse effects on organizations. Pinpointing the time at which these trends will become critical is difficult, but that should not mean they get ignored.

• Climate change, water crises, and large-scale involuntary migrations: These are some of the areas that are highlighted in the WEF's Global Risk 2016 Report, but tend not to appear on many organizations' radar screens. As with the "around the corner" risks, respondents who consider these areas may be giving their organizations a chance for a competitive advantage and to plan more effectively.

For example, the vice president of risk management at a health care organization said a recent incident had caused him to think more about water issues. "It's something that I never really saw on the horizon. Now it's going to be an exercise to say how are we going to address this as a company rather than letting each individual facility or operation try to figure out what they're doing."

- Emerging technologies: What is the next cyber risk? It may exist among the groundbreaking technologies into which research and development is surging: synthetic biology, nanotechnology, artificial intelligence. For example, the entry costs for work in synthetic biology have dropped dramatically in recent years, enabling a much wider range of organizations to become active including so-called "bio-hacker" communities. Between 2009 and 2013, the number of European and US universities conducting research in synthetic biology increased by 40% and the number of companies by 185%, according to The Wilson Center. Such innovations come with various opportunities and benefits, but these are not risk-free endeavors.
- Insufficient infrastructure: Not all emerging risks are on the cutting edge of science and technology. Critical infrastructure failures can impede a company's ability to grow. For example, the Organisation for Economic Co-operation and Development (OECD) estimates that annual investment needs for infrastructure will be more than US\$70 trillion between now and 2030. Infrastructure problems can bring cascading effects within both local and global supply chains, as insufficient roads, bridges, ports, water mains, air traffic, and cyber networks can deter global commerce flow and keep needed goods from arriving on shelves in time.

"Of those who choose cyberattacks as the next critical risk to impact their organizations, 79% said it is already a significant concern."

# RISK FORECASTING EXPECTED TO INCREASE IN DIFFICULTY

The majority of risk professionals, C-suite executives, and financial professionals generally agree that forecasting critical business risks is difficult today and won't get any easier in the next three years (see Figure 2).

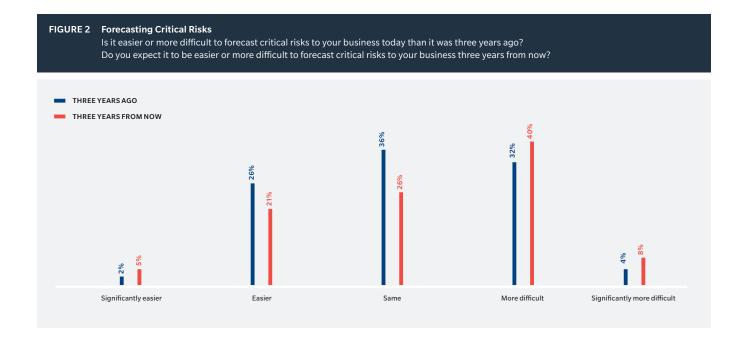
Our results align with a recent survey from the Association for Financial Professionals in which 86% of finance executives said forecasting critical risks will be the same or more difficult in three years. Why?

For one thing, the risk landscape is evolving like a version of Moore's law, seemingly doubling in complexity every few years. The interconnected dynamics of geopolitics, technological advances, global economic integration, social instability, climate change, and more mean that the manifestation of one risk is increasingly likely to influence others. So when a known risk - hurricanes, for example meets with an emerging risk such as rising tides, the outcome is not easy to predict. The combination may exacerbate volatility and create new vulnerabilities with the potential to significantly damage organizations that have not prepared for the

convergence of the old and the emerging.

This is a significant piece of why there is a need to anticipate emerging risks: The ability to predict potential outcomes when risks intersect.

There are additional reasons, including the simple fact that other work gets in the way. Consider the current emphasis on cyber risk at many organizations. "The overarching focus on data and network security, in a way, reduces our ability to focus on other areas," said the vice president of risk management at a major telecommunications company. "So the data stuff has gotten so much priority within the company — and that's great — but the short side of that is that other things may not get as much attention."



This growing interconnectedness creates an environment where keeping up with evolving issues becomes more difficult. Therefore success in risk management now often comes to organizations that develop a multidimensional approach to identifying and managing complex risks. These organizations are able to not only see the risk around the corner, but to understand that it may interact in not-so-predictable ways with existing risks.

# BARRIERS TO UNDERSTANDING

Risk professionals and C-suite executives cited various barriers to understanding the impact of emerging risks on business strategy and decisions (see Figure 3). Although the top five for each group were the same, they did rank them in a different order.

C-suite respondents and risk professionals ranked cultural/ institutional issues one and two, respectively, as the top barriers. But for risk professionals, the problem appears to be tied to an issue that has come up consistently throughout the years of the Excellence survey - a lack of collaboration across the organization. In fact, the needle has not moved in five years: For a similar question in 2011, 43% of risk professionals cited this as the main barrier to preventing a full understanding of the risk landscape - exactly the same percentage as in 2016. Among the C-suite, on the other hand, the percentage of respondents citing this as a barrier dropped from 41% in 2011 to 28% this year.

• When C-suite executives refer to cultural barriers, they appear to be taking aim at a lack of awareness of key risk management concepts. And again, this is a problem that is for some reason intractable — 39% of



#### **INDUSTRY SNAPSHOT**

Transportation, manufacturing, and financial institutions were the most likely to see forecasting becoming more difficult.

Communications, media, and technology (CMT) companies, public entities, and education institutions were the most likely to see forecasting staying the same or becoming easier.

# FIGURE 3 Top Five Barriers to Understanding Emerging Risks What barriers inhibit your organization's ability to understand the impact of emerging risks on business strategy and decisions?

	RISK MANAGEMENT	C-SUITE
1.	Lack of cross-organization collaboration	Cultural/institutional
2.	Cultural/institutional	Lack of awareness of key risk management concepts
3.	Budget	Budget
4.	Inability to model the magnitude of the risk	Inability to model the magnitude of the risk
5.	Lack of awareness of key risk management concepts	Lack of cross-organization collaboration

C-suite respondents in both 2011 and 2016 cited this as the number two barrier.

• On the other hand, our focus group participants, drawn from what we consider to be forward-looking companies, held out many examples of conversations, formal and informal, across their organizations around the intersection of risk and business strategy.

The director of risk management at a global technology company said she is "starting to see some of the silos breaking down, and seeing more risks being incorporated into everyday conversations. I see more people taking ownership for risk within their own groups, and then sharing across functions how they're managing that risk, and then working collaboratively."

And for risk professionals, there are many ways to get leaders' attention: "If we feel like it's going to impede sales and negatively affect our customers, the buy-in is pretty easy, with a solid plan," said the director of risk management at a major food and beverage distributor.



#### **INDUSTRY SNAPSHOT**

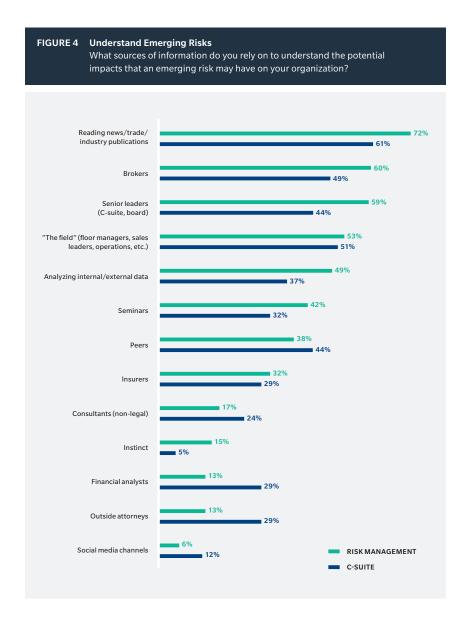
Transportation (44%), education (43%), and CMT (41%) companies most often cited budget as a barrier to understanding emerging risks.

Despite calls by risk professionals to improve data and analytics, the "inability to model" was not a major barrier for many industry groups.

## **FOCUSING ON EMERGING RISKS**

#### **INFORMATION SOURCES**

The information sources that individuals rely on to understand emerging risks can help us understand why forecasting is difficult, and also provide insights into opportunities for improvement. We asked risk professionals what they turn to in order to understand the impacts of emerging risks on their organization (see Figure 4).





#### **INDUSTRY SNAPSHOT**

Education organizations, public entities, and retail/wholesale companies were the least likely to choose analysis of data as a way to understand the potential impact of emerging risks.

Financial institutions were by far the most likely to cite reading publications as a top information source on emerging risk; 88% of FI respondents made that choice.

Health care organizations, public entities, and retail/ wholesalers were the least likely to turn to senior leaders as a top information source.

It is encouraging to note the high level of reliance on reading outside publications, with the caveat that the broader the reading the better the insights. If solely relying on industry publications, the chances of linking organizational strategy to outside risks will be limited. Taking the time to do a deep dive into such publications as the WEF's Global Risks report series, financial analysts' reports, and futurists' blogs, on the other hand, can help connect the dots between organizational strategy and emerging global risks and trends.

- There was also noticeable input sought from senior leaders, others in the organization ("the field"), and brokers - slightly more so by risk professionals than by C-suite respondents. Risk professionals' citing of discussions with senior leaders may point to the function having more input into strategy than it did a few years ago. It will be beneficial if they use that access to steer a part of strategy discussions toward the risks that are on the horizon. This can be difficult, as the director of corporate insurance and risk management at a global retail chain told us: "We are very highly focused on sales and merchandising and that becomes a kind of a singular focus. If there are things that are beyond that, it's hard to get [leadership's] attention to say, 'Hey, you might want to look over here."
- It's worth noting that we also asked survey participants to rank their information sources in terms of importance. Respondents who picked "senior leaders" and "the field"

- as sources were far more likely to see those as most important compared to other sources.
- C-suite executives were noticeably more likely than risk professionals to rely on consultants, financial analysts, outside attorneys, and even social media (although the total number of respondents saying they turned to social media was relatively small). The message to risk professionals should be clear: The C-suite is ahead of you in terms of seeking critical outside perspectives.
- Given today's instantaneous global news environment, social media ranked surprisingly low. The relevance of social media platforms may quickly increase as critical tools to gather information, especially as a wave of retirements works through the risk management field and a younger, more "connected" crowd steps in. Organizations that begin to use social media creatively may find an opportunity to better understand trends that may transform into risks.

# ASSESSING AND MODELING EMERGING RISKS

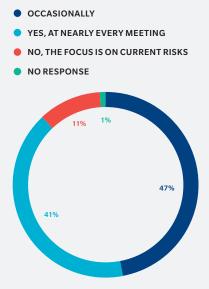
Despite some of the barriers mentioned above, our surveys have clearly shown over the years a steady, growing expectation that risk executives will play a strong role in setting business strategy. They can contribute significantly by not only helping to identify emerging risks, but also to assess their potential impact on various parts of the business, be it around mergers and acquisitions, facility

# Risk Committees

The number of respondents saying their firm has a cross-functional risk committee fell in 2016 compared to the last time we asked the question -52% this year compared to 62% five years ago. As anecdotal evidence suggests, at minimum, no drop in the number of companies with risk committees, this could simply be an anomaly in our data, but it is something we'll keep an eye on in coming years.

That said, we asked those respondents with risk committees if emerging risks were a regular item on their agendas (see Figure 5). Fewer than half of respondents said they were a regular topic, 47% said they were discussed occasionally, and more than 10% said they were never discussed. This suggests work could be done in the underlying governance of risk committees. Whether they meet weekly, monthly, or quarterly, emerging risks should have a firm spot on the agenda.





siting, product development, or other areas. And yet, both risk professionals and the C-suite say that the inability to model the magnitude of emerging risk is a top four barrier.

When asked what technique organizations were using to assess and model emerging risks, it was somewhat surprising that the top choice was claims-based reviews.

The wide use of claims-based reviews (see Figure 6), however, may indicate that companies are not quite assessing and modeling critical risks. Far fewer respondents said analytics — including stochastic modeling and game theory — were used to assess and model emerging risks.

Yet 74% choose "quantifying specific risks, including emerging risks," as an area where they want to improve their use of analytics (see Figure 7).

The overwhelming use of claims-based reviews suggests that organizations are relying on studying past incidents to predict how emerging risks will behave. Although there are clear benefits to reviewing claims, there are other tools available and likely more suited to assessing emerging risks. For example, predictive analytics, whether conducted in-house or by an outside consultant, should be part of a comprehensive approach to evaluate critical emerging risks.

Scenario planning — an exercise that describes how future events may play out to determine potential business strategies — is another effective tool for assessing emerging risks, yet less than one-third of respondents said it is in their tool kit.

There is, however, a clear hunger to develop better methods to identify, assess, and quantify emerging risks. Nearly three out of four respondents said their organization would benefit by improving the use of analytics to quantify emerging risks. But risk professionals question whether their organizations will finance the required tools and talent. "Some of the software is really nice, but the amount of time and people it will take to make that software run makes me question whether it's really going to create value in a company like ours," said the vice president of risk and insurance at a US-based power company. "It's finding that balance point of what software and tools can we use that really create value."

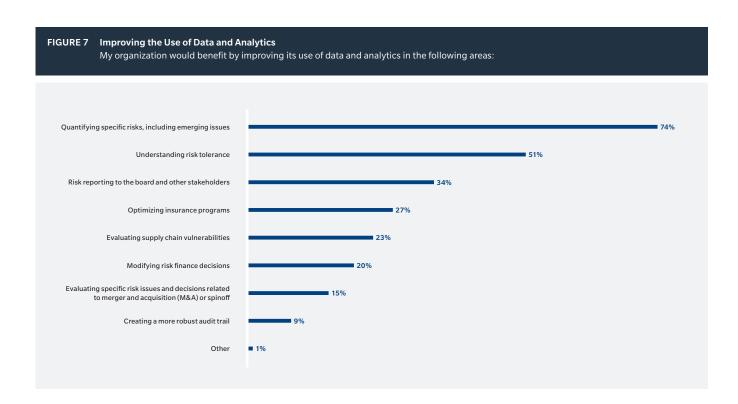


#### **INDUSTRY SNAPSHOT**

Financial institutions and energy companies were the only industries to say they do not rely on claims-based reviews above all other tools. Fl's top choice was analytics; energy's was third parties.

A higher proportion of health care and transportation organizations cited claims-based reviews than was the case in other industries.





# INVESTING TO FORESEE EMERGING RISKS

As the risk environment becomes increasingly complex and more entwined with financial decisions, risk strategy is increasingly a boardroom issue. As we have seen in past *Excellence* surveys, senior leaders' expectations of the risk management department have increased in everything from leading enterprise risk management to providing better risk quantification and analysis.

However, while more is being asked of risk professionals, investment is not necessarily keeping pace (see Figure 8). For example, the percentage that say they expect to hire more staff dropped to 25% this year from 37% when we asked in 2015. "We've all experienced this elevation of risk management at our institutions, but...as we are battling for budget, it becomes pretty easy for risk management to get pushed over to the side," said the assistant vice president of risk management at a major university.

Regarding other decisions around investments in risk management:

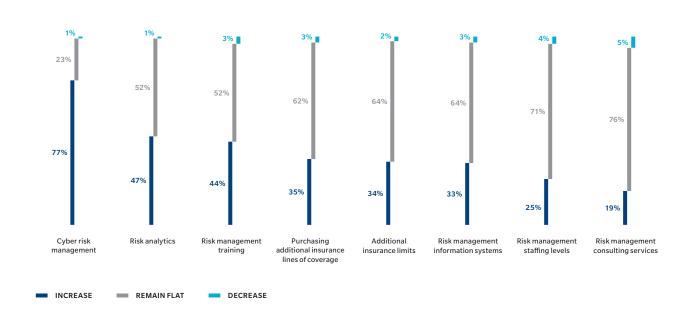
 Cyber risk stands out as the topic du jour for which more than threequarters of our respondents expect to see investments increase over the next two years. "In 36 months, the quantity of time and the interest and energy having to do with all things cyber and privacy breach has been amazing," said the vice president of risk management at a major property/casualty insurer. As stated earlier, cyber is an interesting case in that it is considered emerging by many, but has been around a relatively long time now.

• The good news is that few organizations expect decreased investment in risk management; most expect them to at least remain flat. For those companies that do see increases, the decisions about exactly where to focus spending can be critical, potentially affecting the direction of their department for years to come. It is thus important to consider emerging risks when making these decisions.

Risk information systems are another important support mechanism, allowing risk executives to create "one version of the truth" by aggregating disparate information. As this is often a difficult exercise, it is one reason that organizations turn to outside

FIGURE 8 Risk Management Investment

For each area below, do you expect your level of investment over the next two years to increase, remain flat, or decrease?



parties with deep databases and the analytical framework to help risk professionals develop insights. "I think there's going to be much more focus on whether you'll be able to do analytics yourself or if you need to bring somebody else in to help identify those things," said the vice president of risk management of a real estate investment firm.

The focus is quickly migrating to one of understanding and managing the balance between risk and capital. A key consideration for organizations that truly aim to become more strategic in managing risk will be to build a decision-making framework that efficiently balances their own capital against capital from outside sources, including insurance.

Additionally, that framework needs to model risks that are not necessarily insurable so that organizations are creating risk finance structures to reduce volatility around the loss potential of the most significant exposures. With such a model, organizations will have a means to better understand how emerging risks can impact their balance sheet, and to incorporate appropriate financial tools that fit their particular capital structures.



#### **INDUSTRY SNAPSHOT**

Education and public entity/ government organizations indicated that they will increase their investment in risk management training.

Power/energy companies, education organizations, and financial institutions are the top three industries to increase their cyber risk management investments.

Transportation organizations indicated that they will increase their investment in additional insurance limits.

Financial institutions, health care organizations, and power/energy companies said they will look to increase their investment in risk analytics.

### RECOMMENDATIONS

Being ready for the risks ahead and alerting your organization as to their potential impact is a key role for risk executives. Whether they are on your doorstep, around the corner, or on the far horizon, emerging risks have the potential to catch your company unaware — or, with proper insight and planning, provide opportunity and a competitive advantage. Here are a few final thoughts for consideration:

- Foster broad collaboration around risk issues in your organization.
   Tackling emerging risks often requires creative but pragmatic approaches that encompass cross-functional support across the organization and senior-leader engagement.
- Challenge the agenda of your organization's risk committee.
   Does it include a review of broader trends and the potential emerging risks in its governance framework?
   Discussions around emerging risks should be a regular feature, not a once-a-year exercise.
- Use a broad array of information sources to understand emerging risks. A narrow use of claims data and reliance on internal sources to understand emerging risks may limit your view. Reading and discussing with your peers ideas such as those brought forth in the WEF's annual *Global Risks Report*, financial analysts' reports, and futurists' blogs can help you make connections that may otherwise escape you.

- Push ahead on the use of data and analytics as a means to identify, assess, and manage emerging risks. As technology continues to evolve and data to accumulate, the potential for predictive analytics to inform your decision-making gets stronger by the day.
- Seek external voices to challenge conventional thinking in your organization. Although there will be trusted people with valuable perspectives in your company, an outsider's view can help link unseen issues to create broader, more robust conversations around emerging risks.
- Pay attention to social media; embrace it — or at least don't tune it out. The world of communication is rapidly changing, with social media front and center. These platforms may increase in value as tools to gather information and — combined with analytics — to identify and even manage emerging risks.
- Use this report and others within your organization to stimulate discussion around the future of risk management.



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# **About this Report**

This report is based on more than 700 responses to an online survey and a series of focus groups with leading risk executives conducted by Marsh and RIMS in January/February 2016.



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