NC STATE Poole College of Management

Enterprise Risk Management Initiative

protiviti®

Face the Future with Confidence

Executive Perspectives on Top Risks for 2018

Key Issues Being Discussed in the Boardroom and C-Suite

Research Conducted by North Carolina State University's ERM Initiative and Protiviti

Introduction

The impact of disruptive change, major cyber breaches affecting a number of organizations in the capital markets, the effects of hurricanes Harvey, Irma and Maria and other significant natural disasters, elections in Europe, geopolitical instability in Asia and the Middle East, volatility in commodity markets, continued unfolding of political agendas, anticipation of increases in interest rates, and unpredictable but inevitable terrorist events are only some of the drivers of uncertainty affecting the global business outlook for 2018. Entities in virtually every industry and country are reminded all too frequently that they operate in what appears to many to be an increasingly risky global landscape. Escalating concerns about the rapidly changing business environment and the potential for unexpected surprises vividly illustrate the reality that organizations of all types face risks that can suddenly impact them with complex enterprisewide risk events of varying velocity and headline effect that threaten brand, reputation, and, for some, their very survival. Boards of directors and executive management teams cannot afford to manage risks casually on a reactive basis, especially in light of the rapid pace of disruptive innovation and technological developments in a digital world.

Protiviti and North Carolina State University's ERM Initiative are pleased to provide this report focusing on the top risks currently on the minds of global boards of directors and executives. This report contains results from our sixth annual risk survey of directors and executives to obtain their views on the extent to which a broad collection of risks are likely to affect their organizations over the next year.

Our respondent group, comprised primarily of board members and C-suite executives, provided their perspectives about the potential impact in 2018 of 30 specific risks across these three dimensions:[1]

- **Macroeconomic risks** likely to affect their organization's growth opportunities
- **Strategic risks** the organization faces that may affect the validity of its strategy for pursuing growth opportunities
- **Operational risks** that might affect key operations of the organization in executing its strategy

In presenting the results of our research, we begin with a brief description of our methodology and an executive summary of the results. Following this introduction, we discuss the overall risk concerns for 2018, including how they have changed from 2017 and 2016, followed by a review of results by size of organization and type of executive position, as well as a breakdown by industry, type of ownership structure (i.e., public company, privately held, not-for-profit and government), geographic location of their headquarters (i.e., based in either North America, Europe, Asia-Pacific or Africa), and whether they have rated debt outstanding. We conclude with a discussion of organizations' plans to improve their capabilities for managing risk.

[1] Our report about top risks for 2016 included 27 specific risks. Three additional risks were added for the 2017 survey and they remain in our 2018 survey, resulting in a list of 30 risks surveyed. See Table 1 for a list of the 30 risks addressed in this study.

Methodology

We are pleased that participation from executives was strong again this year. Globally, 728 board members and executives across a number of industries participated in this survey. We are especially pleased that we received responses from individuals all over the world, with 327 respondents (45%) based in the United States and 401 respondents (55%) based outside the United States (133 respondents [18%] were based in the Asia-Pacific region, 198 respondents [27%] were based in Europe, 18 [3%] were based in Africa, with the remainder located elsewhere around the globe). In 2017 our responses by region were 55% U.S.-based and 45% non-U.S.-based organizations. As a result, this report again provides a perspective about risk issues on the minds of executives at a global level.

Our survey was conducted online in the fall of 2017. Each respondent was asked to rate 30 individual risk issues using a 10-point scale, where a score of 1 reflects "No Impact at All" and a score of 10 reflects "Extensive Impact" to their organization over the next year.

For each of the 30 risk issues, we computed the average score reported by all respondents. Using mean scores across respondents, we rank-ordered risks from highest to lowest impact. This approach enabled us to compare mean scores across the past three years to highlight changes in the perceived level of risk.

Consistent with our prior studies, we grouped all the risks based on their average scores into one of three classifications:

- Risks with an average score of **6.0 or higher** are classified as having a **"Significant Impact"** over the next 12 months.
- Risks with an average score of **4.5 through 5.9** are classified as having a **"Potential Impact"** over the next 12 months.
- Risks with an average score of **4.4 or lower** are classified as having a **"Less Significant Impact"** over the next 12 months.

We refer to these risk classifications throughout our report, and we also review results for various subgroups (i.e., company size, position held by respondent, industry representation, organization type, geographic location and presence of rated debt). With respect to the various industries, we grouped related industries into combined industry groupings to facilitate analysis, consistent with our prior years' reports.

The following table lists the 30 risk issues rated by our respondents, arrayed across three categories — Macroeconomic, Strategic and Operational.

• • • *Table 1: List of 30 Risk Issues Analyzed*

Macroeconomic Risk Issues
• Anticipated volatility in global financial markets and currencies may create significantly challenging issues for our organization to address
• Uncertainty surrounding political leadership in national and international markets may limit our growth opportunities
• Anticipated changes in global trade policies may limit our ability to operate effectively and efficiently in international markets
• Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organization
• Economic conditions in markets we currently serve may significantly restrict growth opportunities for our organization
• Uncertainty surrounding costs of healthcare coverage for our employees may limit growth opportunities for our organization
• Geopolitical shifts and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth objectives
• Anticipated increases in labor costs may affect our opportunity to meet profitability targets*
• Sustained low fixed interest rates may have a significant effect on the organization's operations*
Strategic Risk Issues
• Rapid speed of disruptive innovations enabled by new and emerging technologies and/or other market forces may outpace our organization's ability to compete and/or manage the risk appropriately, without making significant changes to our business model
• Social media, mobile applications and other Internet-based applications may significantly impact our brand, customer relationships, regulatory compliance processes and/or how we do business
• Regulatory changes and scrutiny may heighten, noticeably affecting the manner in which our products or services will be produced or delivered
• Shifts in social, environmental, and other customer preferences and expectations may be difficult for us to identify and address on a timely basis
• Ease of entrance of new competitors into the industry and marketplace may threaten our market share
• Our organization may not be sufficiently prepared to manage an unexpected crisis significantly impacting our reputation
• Growth through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement
• Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organization
• Substitute products and services may arise that affect the viability of our current business model and planned strategic initiatives
• Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base
• Performance vulnerabilities may trigger shareholder activism against our organization that may significantly impact our organization's strategic plan and vision*

* Represents a new risk issue added to the 2017 survey.

Operational Risk Issues
• Uncertainty surrounding the viability of key suppliers or scarcity of supply may make it difficult to deliver our products or services • Risks arising from our reliance on outsourcing and strategic sourcing arrangements, IT vendor contracts, and other partnerships/ joint ventures to achieve operational goals may prevent us from meeting organizational targets or impact our brand image • Our organization's succession challenges and ability to attract and retain top talent may limit our ability to achieve operational targets • Our organization may not be sufficiently prepared to manage cyber threats that have the potential to significantly disrupt core operations and/or damage our brand • Ensuring privacy/identity management and information security/system protection may require significant resources for us • Our existing operations may not be able to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, especially new competitors that are "born digital" and with a low cost base for their operations, or established competitors with superior operations • Inability to utilize data analytics and "big data" to achieve market intelligence and increase productivity and efficiency may significantly affect our management of core operations and strategic plans • Resistance to change may restrict our organization from making necessary adjustments to the business model and core operations • Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues that have the potential to significantly affect our core operations and achievement of strategic objectives • Our organization may face greater difficulty in obtaining affordable insurance coverages for certain risks that have been insurable in the past

Executive Summary

Technological advancements. Disruptive innovations threatening core business models. Recurring natural disasters with catastrophic impact. Soaring equity markets. Turnover of leadership in key political positions. Potential changes in interest rates. Cyber breaches on a massive scale. Terrorism. Elections in Europe. Threats of nuclear engagement. A strong U.S. dollar. These and a host of other significant risk drivers are all contributing to the risk dialogue happening today in boardrooms and executive suites.

Expectations of key stakeholders regarding the need for greater transparency about the nature and magnitude of risks undertaken in executing an organization's corporate strategy continue to be high. Pressures from boards, volatile markets, intensifying competition, demanding regulatory requirements, fear of catastrophic events and other dynamic forces are leading to increasing calls for management to design and implement effective risk management capabilities and response mechanisms to identify and assess the organization's key risk exposures, with the intent of reducing them to an acceptable level.

Key Findings

01

Survey respondents indicate that the overall global business context is slightly less risky in 2018 relative to the two prior years, with respondents in all regions of the world sensing a slight reduction in the magnitude and severity of risks on the horizon in 2018 related to 2017. Respondents in the European (which includes the United Kingdom) region seem to have the highest overall concern about the magnitude and severity of risks on the horizon in 2018 relative to the other regions. Our prior year survey saw an increase in all of the top 10 risks from 2016 to 2017. This year respondents only rated seven of the top 10 risks higher for 2018 relative to 2017, with three of the top 10 risks rated lower for 2018 relative to 2017. This suggests a potential shift in views about the riskiness of 2018 relative to 2017. Despite that slight reduction in risk concerns for some of the risks, a majority of respondents still rated each of the top 10 risks as a "Significant Impact" risk, and for our top risks among the top 10 the overall average score exceeded 6.0 (on a 10-point scale), placing the profile of top risks as "Significant Impact" on an overall basis.

02

Interestingly, respondents indicate that they are likely to devote additional time or resources to risk identification and management over the next 12 months. The overall reality of the riskiness of the global business environment continues to motivate boards and executives to continue their focus on effective risk oversight.

03

While respondents indicated slightly less concern about the overall magnitude and severity or risks for 2018 relative to the two prior years, there are noticeable shifts in what constitutes the top 10 risks for 2018 relative to last year. Two new risks moved into the top 10 spot for 2018 that were not in the top risks for 2017. Interestingly, concerns about the economy and regulatory scrutiny, which have been in the top two risk concerns for the past several years, fell deeper among the top 10 list for 2018. Those risks were topped by concerns related to the rapid speed of disruptive innovation impacting business models and concerns about resistance to change restricting the organization from making necessary adjustments to its business model. There is even greater concern about operational risk issues, with seven of the top 10 risks representing operational concerns (last year five of the top 10 related to such issues). Two of the top 10 risks relate to strategic risk concerns, with only one of the top 10 related to concern about macroeconomic risks. This year's emphasis on operational risks is consistent with our results in the previous two years.

With respect to the top five risks overall:

- **Rapid speed of disruptive innovation —** This strategic risk soared to the top for 2018, exceeding concerns about the economy and regulatory oversight, which have held the top two spots in all prior years we have conducted this survey. Sixty-seven percent of our respondents rated this risk as a "Significant Impact" risk. This top risk for 2018 reflects respondent concerns that disruptive innovation or new technologies might emerge that outpace an organization's ability to keep up and remain competitive. With advancements in digital technologies and rapidly changing business models, respondents are focused on whether their organizations are agile enough to respond to sudden developments that alter customer expectations and change their core business model. For most large companies today, it's not a question of *if* digital will upend their business but *when*. Even when executives are aware of emerging technologies that obviously have disruptive potential, it is often difficult to have the vision or foresight to anticipate the nature and extent of change. Concerns of this nature are elevated for 2018 (from fourth overall last year to the number one concern this year) relative to prior years. This is a top five risk for all six of the industry groups and all size categories of organizations we examine.
- **Resistance to change —** Coupled with concerns about the emergence of disruptive innovations, respondents also highlighted a cultural concern related to overall resistance to change within the organization. Respondents are growing even more focused on the organization's potential lack of willingness to make necessary adjustments to the business model and core operations that might be needed to respond to changes in the overall business environment and industry. As many organizations have discovered in recent years, strategic error in the digital economy can be lethal. If major business model disruptors emerge, respondents are concerned that their organization may not be able to timely adjust its core operations to make required changes to the business model to compete.
- **Managing cyber threats —** Threats related to cyber security continue to be of concern as respondents focus on how events might disrupt core operations. To no surprise, this risk continues to be one of the most significant top operational risks overall and it is a top five risk for each of the four size categories of organizations as well as three of the six industry groupings we examine.
- **Regulatory change and heightened regulatory scrutiny —** This risk continues to represent a major source of uncertainty among the majority of organizations. Fifty-nine percent of our respondents rated this risk as a "Significant Impact" risk. This risk has been in our top two risk concerns all prior years we have conducted this survey. Thus, the fact it moved to the fourth risk indicates, while it is still a major concern, it may be of slightly less concern in 2018 relative to the prior five years. Political gridlock and checks and balances in governing institutions appear to have tempered the specter of significant change on the regulatory front. In the United States, the current administration has demonstrated a propensity to reduce the regulatory burden.
- **Culture may not encourage timely escalation of risk issues —** Interestingly, respondents continue to highlight the need for attention to be given to the overall culture of the organization to ensure it is sufficient to encourage the timely identification and escalation of risk issues. This risk issue was added to our 2015 risk survey, and it has been included in the top 10 risks each year since then. Interestingly, the level of concern is heightened for 2018 relative to the prior two years. Sixty-one percent of respondents rated this risk as a "Significant Impact" risk. This

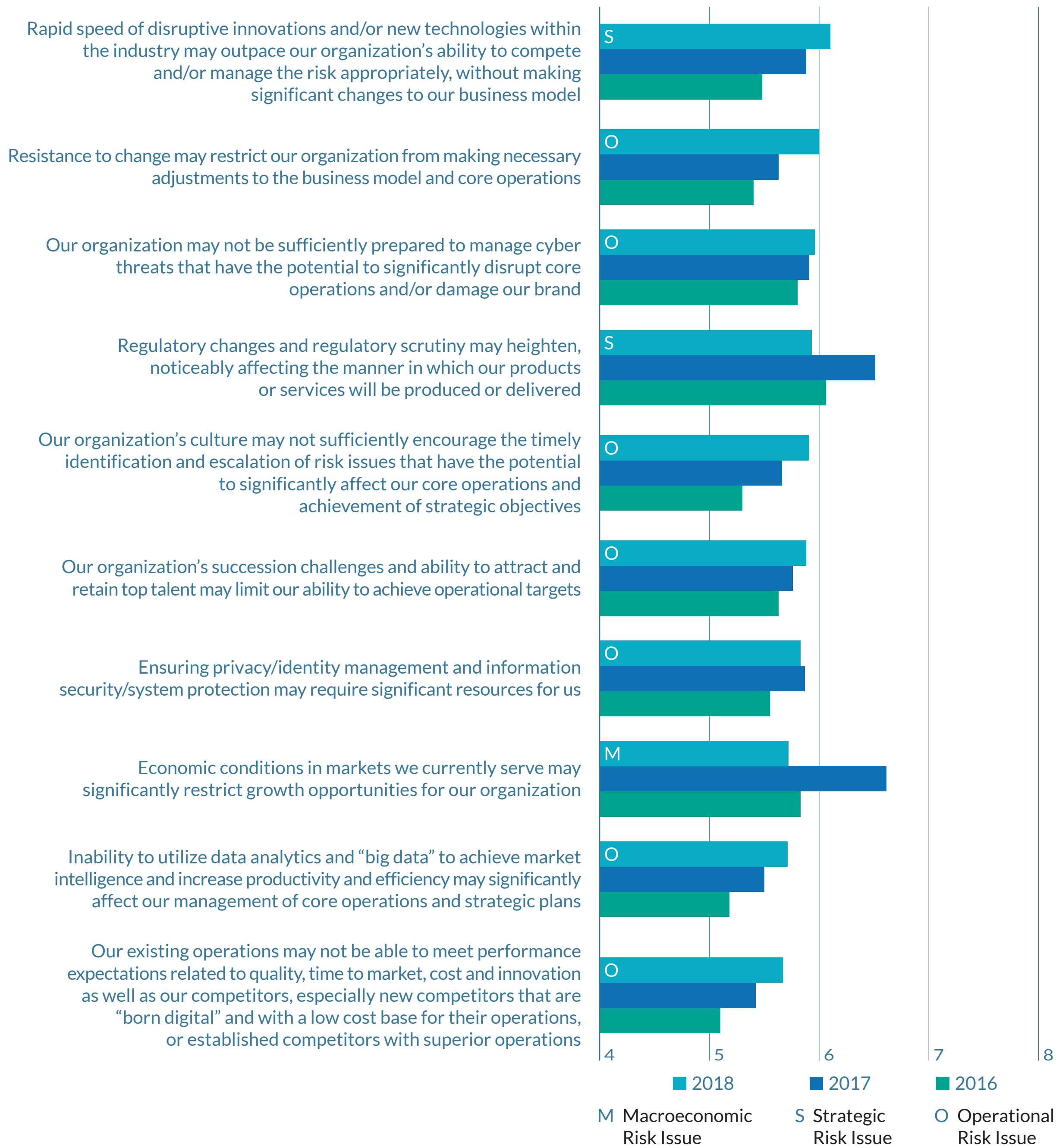
issue, coupled with concern related to resistance to change, can be lethal if it results in the organization's leaders becoming out of touch with business realities.

- **Mixed views about the magnitude and severity of risks expected in coming year —** There is variation in views among boards and C-suite executives regarding the magnitude and severity of risks for 2018 relative to prior years. Interestingly, board members report the highest increase in concern relative to their views in the prior year, suggesting heightened concerns for 2018. In contrast, while the level of concern stayed about the same for chief executive officers (CEOs) and chief financial officers (CFOs), the overall concern among chief risk officers (CROs) was notably lower for 2018 relative to 2017. CAEs and CROs appear to be the most optimistic, as they rated seven and four, respectively, of the 30 risks at the lowest impact level, while board members and most of the rest of the C-suite rated none of the 30 risks at the lowest level (a rating below 4.5 on our 10-point scale). The noted differences in risk viewpoints across different types of executives seem to be a concern at the global level, given that we find similar kinds of differences in viewpoints continue to be present when examining different regions of the world separately. These findings suggest there is a strong need for discussion and dialogue to ensure the organization is focused on the right emerging risk exposures.
- **Boards see riskier environment —** Interestingly, as noted above, board members perceive a much riskier environment in 2018 relative to 2017. Board members rated nine of the 30 risks as "Significant Impact," whereas CEOs ranked none of the 30 risks as "Significant Impact" risks. While the overall concern about the magnitude and severity of risks was lower in 2018 relative to 2017 for CROs, they still identified five of the 30 risks as "Significant Impact" risks.

One of the first questions an organization seeks to answer in risk management is, "What are our most critical risks?" The organization's answer to this question lays the foundation for management to respond with appropriate capabilities for managing these risks. This survey provides insights across different sizes of companies and across multiple industry groups as to what the key risks are expected to be in 2018 based on the input of the participating executives and board members.

The list of top 10 global risks for 2018, along with their corresponding 2017 and 2016 scores, appears in Figure 1 on the following page. Table 2 on page 12 lists the top 10 risks with the percentage responses for the three risk classifications (Significant Impact, Potential Impact, Less Significant Impact) we employ in this report.

• • • *Figure 1: Top 10 Risks for 2018*



In addition to our Key Findings, other notable findings this year with regard to those risks making the top 10 include the following:

- The risk of succession challenges and the ability to attract and retain talent continues to be an overall top 10 risk, likely triggered by a tightening labor market (though the decline in unemployment rates has been relatively modest), but it is especially prevalent for entities in the Consumer Products and Services, Healthcare and Life Sciences, and Energy and Utilities industry groups. To thrive in the digital age, organizations need to think and act digital and this requires a different set of capabilities and strengths. Talented people aspire to be a contributor in a contemporary, dynamic, digitally focused business with its best days ahead of it, rather than to be bound to a slow-moving dinosaur of a company that is not structured to be innovative and dynamic even though it may have a strategy that asserts it will be. Respondents continue to perceive that significant operational challenges may arise if organizations are unable to sustain a workforce with the skills needed to implement their growth strategies.
- Concerns related to privacy and identity protection continue to be among the top 10 risk concerns for 2018. The presence of this risk in the top 10 is somewhat expected given the increasing number of reports of hacking and other forms of cyber intrusion that compromise sensitive personal information.
- Interestingly, respondents are not as concerned about economic conditions in domestic and international markets relative to prior years. In the five prior years we have conducted this study, economic concerns were high, placing this risk near or at the top of our top 10 risks each year. Last year, economic concern was the top risk concern, whereas it dropped several positions to the eighth position in the top 10 for 2018. In fact, this is the only macroeconomic risk included in the top 10 risk list, suggesting respondents seem more positive about macroeconomic issues for 2018 relative to the past several years.
- Two risks moved into the top 10 list of risks for the first time this year. Respondent concerns are growing surrounding their ability to utilize data analytics and "big data" to achieve competitive advantage and to manage operations and strategic plans. They sense that other organizations may be able to capture intelligence that allows them to be more nimble and responsive to market shifts and changing customer preferences. In the digital age, knowledge wins and advanced analytics is the key to unlocking the gate to insights that can differentiate in the market. Additionally, respondents are concerned about the ability of their organization to adjust existing operations to meet performance expectations as well as competitors. This is especially heightened by the concern that new competitors may be able to leverage digital capabilities that allow them to introduce new business models more cost effectively. Hyper-scalability of digital business models and lack of entry barriers enable new competitors to emerge and scale very quickly in redefining the customer experience, making it difficult for incumbents to see it coming at all, much less react timely to preserve customer loyalty.

In addition to our analysis of the top 10 risk results for the full sample, we conducted a number of sub-analyses to pinpoint other trends and key differences among respondents. Additional insights about the overall risk environment for 2018 can be gleaned from these analyses, which we highlight in a number of charts and tables later in this report. Following are some significant findings:

- Consistent with the observation that respondents rated the overall magnitude and severity of the risk environment slightly lower for 2018 relative to 2017, the average risk score for 10 of the 30 risks decreased from 2017 to 2018. This is noticeably different from 2017, where we saw an increase in overall risk score for each of the risks surveyed in both 2016 and 2017. Taken together, these results suggest a slightly more positive outlook about the risk environment for 2018 relative to 2017. When we look at the results across different regions of the world (i.e., North America, Asia-Pacific, Europe and Africa), we find that respondents in the European region rated all of their top five risks as "Significant Impact" risks (i.e., average risk score of 6.0 or higher on our 10-point scale). In comparison, respondents in the Asia-Pacific and North American regions rated three of their top five risks as "Significant Impact" risks, while respondents from Africa rated just two as "Significant Impact" risks.

- Three of the top five risks for 2018 with the greatest increase in risk ratings from 2017 relate to operational risk concerns. Interestingly, two of those risks relate to cultural issues — resistance to change and the organizational environment affecting the identification and escalation of risks. Concerns about the emergence of competitors who can leverage digital-based technologies to trim operational costs is also an increased concern.
- Not surprisingly given concerns surrounding certain governments such as North Korea and certain regions such as the Middle East, respondents also exhibit increased concern related to geopolitical shifts and instabilities in governmental regimes. This risk increased the most out of all 30 risks.
- All organizations signaled an increased concern about identifying and responding to unexpected shifts in social, environmental, and other customer preferences. For certain demographic shifts, such as a growing aged population and urbanization, organizations are concerned that they may not recognize those shifts on a timely basis, or they are concerned that their existing business models may not be sustainable under new conditions.
- Surprisingly, there are noticeable differences in viewpoints between board members and C-suite executives about the nature of the overall risk environment and the need to invest more time and resources in risk management for 2018. Board members are much more concerned about the overall magnitude and severity of risks relative to senior management. Board members ranked nine of the 30 risks as "Significant Impact" risks. In contrast, CEOs and CIOs ranked none of the 30 risks at that level, while CFOs only ranked three at that level.
- Board members are most concerned about the impact of the continued low interest rate environment on their organization's operations. That represents their number one risk concern. They also identified four operational risks as "Significant Impact" risks: preparedness to manage cyber threats, inability to leverage "big data," the ability to obtain affordable insurance, and resistance to change. Board members are also concerned about the entrance of new competitors in the marketplace and the ability to sustain customer loyalty. All of the top five risks identified by board respondents are "Significant Impact" risks.
- The top five risk concerns of CEOs include none that are "Significant Impact" risks and only two of their top five overlap with the top five risks of the board: cyber threats and ease of entrance of new competitors. CEOs are more worried about the lack of organic growth opportunities, the rapid speed of disruptive innovations, and anticipated volatility in the global financial markets and currencies. These differences in views highlight the critical importance of engaging in robust conversations with boards and senior management. It also suggests that board members may not be fully engaged with the digital revolution and its implications to the companies they serve.

- The two largest size categories of organizations rated four of their top five risks as "Significant Impact" risks. The smallest organizations (those with revenues under $100 million) rated none of their top five risks as "Significant Impact." Thus, the environment for large organizations appears to be the riskiest relative to entities in the other size categories. Unease over operational risks is common among all sizes of organizations (although the specific operational risks differ), and concerns about those risks are generally higher for 2018 relative to 2017. These findings emphasize the reality that there is no "one size fits all" list of risk exposures across all organizations.

- While most industry groups sense that the magnitude and severity of risks affecting their organization are relatively the same in 2018 as compared to the prior year, the Financial Services and Energy and Utilities industry groups saw the largest decrease in overall risk concerns during the most recent year. This is largely due to reduced concerns about some of the macroeconomic risks and reduced concern about the potential for increased regulatory change and scrutiny in 2018 relative to 2017. The Technology, Media and Communications industry group reflects the highest overall concern related to the magnitude and severity of risks overall. Given rapid developments in technological advancements, this industry continues to experience significant change relative to others.

- Globally, organizations from each of the four geographic regions agree that the overall magnitude and severity of risks facing the organization are expected to be high in 2018. The strategic threat from the rapid speed of disruptive innovations and the operational threat from resistance to change are noticeably high for all global regions, except Africa. The top five risks for organizations in the European region are dominated by macroeconomic risks: concerns over low interest rates, economic conditions restricting growth opportunities and anticipated volatility in global financial markets. North America and Africa are the only regions to identify succession challenges as a top five risk. The North American respondents are the only group to include cyber threats as a top five risk.

The remainder of this report includes our in-depth analysis of perceptions about specific risk concerns. We identify and discuss variances in the responses when viewed by organization size, type, industry and geography, as well as by respondent role. In addition, on page 69 we pose key questions as a call to action for board members and executive management to consider that can serve as a diagnostic to evaluate and improve their organization's risk assessment process.

Our plan is to continue conducting this risk survey periodically so we can stay abreast of key risk issues on the minds of executives and observe trends in risk concerns over time.

Table 2: Top 10 Risks (With Percentages of Responses by "Impact" Level)[2]

Risk Description	Significant Impact (6 – 10)	Potential Impact (5)	Less Significant Impact (1 – 4)
Rapid speed of disruptive innovations enabled by new and emerging technologies and/or other market forces may outpace our organization's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	67%	13%	20%
Resistance to change may restrict our organization from making necessary adjustments to the business model and core operations	61%	16%	23%
Our organization may not be sufficiently prepared to manage cyber threats that have the potential to significantly disrupt core operations and/or damage our brand	61%	15%	24%
Regulatory changes and scrutiny may heighten, noticeably affecting the manner in which our products or services will be produced or delivered	59%	17%	24%
Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues that have the potential to significantly affect our core operations and achievement of strategic objectives	61%	16%	23%
Our organization's succession challenges and ability to attract and retain top talent may limit our ability to achieve operational targets	59%	19%	22%
Ensuring privacy/identity management and information security/system protection may require significant resources for us	60%	17%	23%
Economic conditions in markets we currently serve may significantly restrict growth opportunities for our organization	58%	16%	26%
Inability to utilize data analytics and "big data" to achieve market intelligence and increase productivity and efficiency may significantly affect our management of core operations and strategic plans	59%	15%	26%
Our existing operations may not be able to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, especially new competitors that are "born digital" and with a low cost base for their operations, or established competitors with superior operations	58%	15%	27%

[2] The risks presented in Table 2 are in the same top 10 risk order as reported in Figure 1. That list is based on each risk's overall average score (using our 10-point scale). Table 2 merely reflects the percentage of respondents selecting a particular point on the 10-point scale. For example, 61% of respondents selected either "6," "7," "8," "9" or "10" as their response (using our 10-point scale) for the risk related to the organization's culture, whereas only 59% of respondents chose one of those responses for the risk related to regulatory change and scrutiny. The regulatory risk is still ranked higher in the top 10 list of risks because its overall average score is higher given that more respondents selected higher response options for regulatory risk (e.g., more selected "8," "9" or "10" using our 10-point scale) than what they selected for the risk related to the organization's culture.

Overall Risk Concerns for 2018

Before asking respondents to assess the importance of each of the 30 risks, we asked them to provide their overall impression of the magnitude and severity of risks their organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months. We provided them with a 10-point scale where 1 = "Extremely Low" and 10 = "Extensive." The data below shows there appears to be a slightly lower concern about the overall risk environment relative to the last two years.

	2018	2017	2016
Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	6.0	6.2	6.1

Figure 1 (shown earlier) summarizes the top 10 risks for 2018. Eight of the top 10 risk concerns for 2018 were also included in the top 10 list of risks for 2017. Thus, respondents continue to be concerned about similar issues, although the average risk score is lower in 2018 for three of those eight risks included in the top 10 list of risks for both 2017 and 2018. Only one of the top 10 risk issues for 2018 relates to macroeconomic concerns, while two others relate to strategic risk issues. Thus, operational risks again dominate the 2018 top 10 risk challenges.

For 2018, respondents are especially focused on the risks associated with the potential **rapid speed of disruptive innovations** and dramatic changes that new technologies may have in the marketplace. This risk rose significantly for 2018 to the number one risk concern among the top 10 list of risks for 2018. Innovations in traditional forms of conducting business may quickly interrupt what has been a core way of doing business. If organizations are not proactively thinking about how they might respond, they may be too late to deal with the impact. Further complexity arises from the nature of innovative, market-changing organizations; these companies are built differently, not because they have a "digital strategy," but because they "think and behave digitally" in setting and executing strategy. With the accelerating speed of change and the advancement of digital technologies, rapid response to changing market expectations is a significant competitive advantage for organizations that are nimble as an early mover and able to avoid bureaucratic "command and control" processes that slow down the ability to change in the face of market opportunities. For senior executives and their boards, the exciting or worrisome truth is that the digital revolution is only just getting started. This risk made the top five list of risks for all size categories of organizations we examine in this study. It is viewed as having a "Significant Impact" in four of the six industry groups we examined.

In addition to issues related to disruptive innovation, respondents also continue to indicate that **resistance to change** restricting necessary adjustments to their business model and core operations is a top 10 risk for 2018. In these uncertain times, it makes sense to enhance the organization's ability and discipline to act decisively on revisions to strategic and business plans in response to changing market realities, particularly in light of the potential for significant disruptive innovation. To that end, organizations committed to continuous improvement along with breakthrough, disruptive change and innovation to processes, products and services are more apt to be early movers in exploiting market opportunities and responding to emerging risks. The rules of the game are disrupt or be disrupted. This risk concern made the top five list of risks for all sizes of organizations, except for our smallest category (i.e., revenues below $100 million). More importantly, board members, CROs, CAEs and chief information officers (CIOs) all rated this risk as a "Significant Impact" risk for 2018.

It should come as no surprise to see that concerns about the risk of **cyber threats disrupting core operations** for organizations remained in the top five risk challenges. Cyber risks have evolved into a moving target, with digitization advances, cloud computing adoption, mobile device usage, creative applications of exponential increases in computing power, and innovative IT transformation initiatives constantly outpacing the security protections companies have in place. Given publicity about data breaches, ransomware attacks and failures to patch known vulnerabilities, along with the growing presence of state-sponsored cyber terrorism, more executives and directors are recognizing the need for "cyber resiliency." The old thinking of "it is not a matter of if a cyber risk event might occur, but more a matter of when it will occur" is dated. It's happening — now. For the majority of companies, cyber risk events have already taken place and continue to take place, yet many companies do not have the detection and response capabilities they need to reduce the impact and proliferation of an event. With the increasing sophistication of perpetrators and the significant impact of a breach, more organizations are recognizing that this risk is an enterprise security issue, not just an IT security issue. Cyber is likely to never leave the stage as a top risk as companies increase their reliance on technology in executing their global strategies.

While anxiety continues over how **regulatory changes and heightened regulatory scrutiny** may affect the manner in which an organization's products and services will be produced or delivered remains high on the top 10 risks for 2018, this risk fell a few spots from the previous year. Relative to concerns about disruptive innovation, resistance to change and cyber threats, respondents are less concerned about regulatory changes and regulatory scrutiny. In four of the five prior risk surveys we have conducted, regulatory risk was the number one risk concern. Perhaps discussions among political leaders in the U.S. about reducing some of the regulatory burden are providing some a sense that potential relief may be on the horizon. This risk is included in the top five list of risks for all sizes of organizations except those with revenues between $100 million and $999 million. Three of our six industry groups rated this risk as a "Significant Impact" risk (i.e., a risk with an average score of 6.0 or higher on our 10-point scale). The stakes are high since, without effective management of regulatory risks, organizations are reactive, at best, and noncompliant, at worst, with all of the attendant consequences.

Respondents expressed concern that their **organization's culture may not encourage the timely identification and escalation of risk issues** that might significantly affect core operations. This risk moved into our top five for the first time in the six years we have conducted this study. Despite the recognition that there are a number of top risk concerns along operational, strategic and macroeconomic dimensions, there appears to be an overall lack of confidence that sufficient processes are in place for individuals to raise risk issues to the leadership of the organization. The collective impact of the tone at the top, tone in the middle and tone at the bottom on risk management, compliance and responsible business behavior has a huge effect on timely escalation of risk issues. The timely identification and escalation of key risks is not easy, which is likely why this risk was ranked highly. Given the overall levels of risk impact scores for all risks in 2018, this cultural issue may be especially concerning to senior management and boards. Both CFOs and chief audit executives rated this risk as a "Significant Impact" risk for 2018.

Succession planning and acquiring and retaining talent remains a top risk concern for 2018. For the past five surveys, this risk has appeared in the list of top 10 risks, with respondents rating its overall risk impact score slightly higher this year relative to last year. With changing demographics in the workplace due to an aging population and the increasing influence of millennials, the challenges of slower economic growth, increasingly demanding customers, increasingly complex business models, and growing complexity in the global marketplace, organizations must up their game to acquire, develop and retain the right talent. Multiple trends are transforming the global talent landscape as well as creating the need for altering talent management strategies. These trends include globalization, digitalization, increasing mobility, worker shortfalls over the long term in many developed countries, and growing opportunities in emerging markets. To illustrate, digital technology is not only about embracing the latest software tools and apps, it also raises the bar in the war for talent. To thrive in the digital age, organizations need to think and act digital and this requires a different set of capabilities, knowledge and skills. As boundary-less organizations expand their global reach, they must "think digital" as well as "think global" as they build the culturally aware, diverse and collaborative teams needed to be agile and resilient so they can innovate and face the future confidently. For example, companies in some industries must now access talent pools globally to obtain the specialized knowledge and technical know-how they need. The survey results likely indicate that executives recognize the need for talented people with the requisite knowledge, skills and core values to execute innovative and challenging growth strategies in a rapidly changing world.

Along with concerns about cyber threats are challenges related to **privacy/identity management and information security/system protection.** Technological innovation is a powerful source of disruptive change, and no one wants to be on the wrong side of it. Cloud computing, social media, mobile technologies and other initiatives to use technology as a source of innovation and an enabler to strengthen the customer experience present new challenges for managing privacy, information and system security risks. Recent hacking attacks that exposed tremendous amounts of sensitive information involving a number of large companies and the federal government highlight the realities of this growing risk concern. The recent massive breach exposing the personal information of over 40 percent of the U.S. population exploited a systems vulnerability that had been identified for two months but had not been repaired. As stated above, the continued advances of technology disruptors in the form of digitization to harvest new sources of value through business model innovation require continued progress in maturing security and privacy capabilities across the enterprise. Achieving this maturation requires improved collaboration between IT and the core business.

While in prior years respondents have consistently indicated notable concerns about overall **economic conditions restricting growth** in markets their organizations serve, that risk issue fell from the number one spot in 2017 to the eighth position in our top 10 list for 2018. Strong capital markets, continued low interest rates, the push toward tax reform in the U.S., rising consumer confidence, and perceptions that regulatory relief may be on the horizon are creating more optimism about the economy for 2018 relative to prior years. CEOs generally rate conditions in the U.S. and in many mature and emerging economies favorably. Only board members rate this risk as a "Significant Impact" risk for 2018. Similarly, only respondents in the Technology, Media and Communications industry group rated this risk at that level. Additionally, only respondents in the European and African regions included economic conditions in their top five list of risks. That is not too surprising given the ongoing focus on operationalizing Brexit, recent elections in France and Germany, and turmoil in Spain affecting the Catalan region. In continuing to rate this risk in the top 10 list of risks, executives and directors may be mindful that the pace of economic growth could shift, dramatically and quickly, in any region of the global market, increasing the importance of being in the right markets at the right time.

Two new risks entered the top 10 list of risks for 2018 for the first time. Respondents are beginning to realize the growing volume of data that may be available to them, but they are concerned that they may not have the **ability to utilize data analytics and "big data"** as effectively as others. Many are observing how some major players in the marketplace are leveraging knowledge gleaned from structured and unstructured data to improve operational efficiency and effectiveness and target products and services to those likely to be most interested. Respondents are concerned that they may be falling behind some of their key competitors with these capabilities and that may limit their ability to manage core operations and strategic plans. This is particularly a concern for board members, who rated this risk as a "Significant Impact" risk for 2018.

The other risk entering the top 10 list relates to a similar concern that competitors may be more able to **leverage digital-based technologies to launch new business models** that have lower costs of operations relative to traditional ways of doing business. As noted earlier for established incumbents, achieving awareness of emerging technologies that obviously have disruptive potential is not that difficult to accomplish; what's difficult is formulating the appropriate vision or foresight that anticipates the nature and extent of the expected change and then taking the necessary steps to act on that perspective. Accordingly, many established incumbents tend to focus on framing a "digital strategy" without really focusing on thinking and behaving digitally in setting and executing strategy. As a result, they implement a strategy that is digital on the edges, but not at the core. New market entrants that are "born digital" typically have a digital core. This is particularly a concern for respondents in the Technology, Media and Communications industry group, who rated this risk as a "Significant Impact" risk for 2018.

Two of the top 10 risks — **disruptive innovation** and **resistance to change** — are rated as "Significant Impact" risks (i.e., an average risk score of 6.0 or higher) for this year, and the overall risk scores for seven of the 10 top risks were rated more highly by respondents in 2018 relative to 2017 and 2016. This suggests an overall increase in concerns about these risk issues for the upcoming year relative to prior years.

We also compared the average scores for 2018 for the total population of 30 risks that we examined in 2017 to identify those risks with the largest changes in scores from 2017 to 2018. The five risks with the greatest increases in risk scores are shown in Table 3. Three of the five risks with the biggest year-over-year increases relate to operational risks. Concerns about resistance to change, culture and the entrance of new competitors that are "born digital" are top of mind. Coupled with those operational concerns, respondents are especially concerned about geopolitical shifts and instability in governmental regimes or expansion of global terrorism. Threats tied to North Korea, tensions in the Middle East and the continued presence of terrorist events increased this risk more than any of the other 29 risks in our list of 30 risks for 2018.

Among the increasing risk issues, respondents are also concerned that shifts in social, environmental and other customer expectations may be hard to identify and address.

Table 3: The Five Risks with Highest Level of Increase

Risk Description	Type of Risk	2018	2017	Increase
Geopolitical shifts and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth objectives	Macroeconomic	5.08	4.66	0.42
Resistance to change may restrict our organization from making necessary adjustments to the business model and core operations	Operational	6.00	5.63	0.37
Shifts in social, environmental and other customer preferences and expectations may be difficult for us to identify and address on a timely basis	Strategic	5.57	5.28	0.29
Our existing operations may not be able to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, especially new competitors that are "born digital" and with a low cost base for their operations, or established competitors with superior operations	Operational	5.67	5.42	0.25
Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues that have the potential to significantly affect our core operations and achievement of strategic objectives	Operational	5.91	5.66	0.25

We also examined those risks with the greatest reduction in risk impact scores from 2017 to 2018 (see Table 4). Four of the five risks with the greatest decrease represent macroeconomic issues. Concerns related to regulatory change and regulatory scrutiny also decreased noticeably for 2018.

Table 4: The Five Risks with Highest Level of Decrease

Risk Description	Type of Risk	2018	2017	Decrease
Economic conditions in markets we currently serve may significantly restrict growth opportunities for our organization	Macroeconomic	5.72	6.61	-0.89
Regulatory changes and scrutiny may heighten, noticeably affecting the manner in which our products or services will be produced or delivered	Strategic	5.93	6.51	-0.58
Anticipated changes in global trade policies may limit our ability to operate effectively and efficiently in international markets	Macroeconomic	4.84	5.21	-0.37
Anticipated increases in labor costs may affect our opportunity to meet profitability targets	Macroeconomic	5.20	5.53	-0.33
Anticipated volatility in global financial markets and currencies may create significantly challenging issues for our organization to address	Macroeconomic	5.37	5.67	-0.30

Three-Year Comparison of Risks

We provide an analysis of the overall three-year trends for the 30 risks surveyed this year. As discussed previously, to help identify differences in risk concerns across respondent type, we group all the risks based on their average scores into one of three classifications. Consistent with our prior studies, we use the following color-coding scheme to highlight risks visually using these three categories. Table 5 that follows summarizes the impact assessments for each of the 30 risks for the full sample, and it shows the color code for the 27 risks examined in all three years. Recall that we added three risks to the 2017 study (for a total of 30 risks considered in both 2017 and 2018). Thus, we show results for the last two years for those three new risks added in 2017.

- Significant Impact – Rating of 6.0 or higher
- Potential Impact – Rating of 4.5 – 5.9
- Less Significant Impact – Rating of 4.4 or lower

Twenty of the 30 risks increased in 2018 relative to 2017 based on their average risk scores. Among the 10 risks that saw a decrease in risk score from 2017 to 2018, six represent macroeconomic risks, suggesting that respondents are noticeably less concerned about overall economic conditions and geopolitical mega trends for 2018. The top two risk concerns — disruptive innovation and resistance to change — both moved from the "Potential Impact" category to the "Significant Impact" category, and they represent the only two risks in our list of 30 risks that are rated at that level.

Concerns about the economy and regulatory changes and regulatory scrutiny both dropped from the "Significant Impact" category to the "Potential Impact" category from 2017 to 2018. While respondents have consistently rated risks related to economic conditions and regulatory change as the two top risk concerns over all the prior five years we have conducted this study, they are less concerned about both of these issues for 2018.

For the most part, the relative significance of all the other remaining risks has remained consistent for all years, as observed by the consistency in color reflected for most risks across the three years reported. Interestingly, all three risks added to the survey in 2017 are rated as "Potential Impact" risks in both 2017 and 2018, suggesting that there continues to be a moderate level of concern related to each of these risk issues.

Other than the two risks deemed to be "Significant Impact" risks, all the remaining 28 of 30 risks are at the "Potential Impact" level (i.e., in yellow) for 2018, suggesting that all risk concerns repeatedly fall into a category of risks to keep an eye on, given they might potentially emerge as a more significant issue. None of the 27 risks with data for 2016, 2017 and 2018 is consistently at the "Less Significant Impact" level (i.e., all green circles). Collectively, these findings suggest there are a number of risk concerns on the horizon that may be worthy of proactively monitoring over time.

Table 5: Perceived Impact for 2018 Relative to Prior Years – Full Sample

Macroeconomic Risk Issues	2018 Rank	2018	2017	2016
Economic conditions in markets we currently serve may significantly restrict growth opportunities for our organization	8	🟡	🔴	🟡
Uncertainty surrounding political leadership in national and international markets may limit our growth opportunities	16	🟡	🟡	🟡
Anticipated volatility in global financial markets and currencies may create significantly challenging issues for our organization to address	18	🟡	🟡	🟡
Sustained low fixed interest rates may have a significant effect on the organization's operations	20	🟡	🟡	N/A
Anticipated increases in labor costs may affect our opportunity to meet profitability targets	22	🟡	🟡	N/A
Geopolitical shifts and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth objectives	25	🟡	🟡	🟢
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organization	26	🟡	🟡	🟡
Anticipated changes in global trade policies may limit our ability to operate effectively and efficiently in international markets	28	🟡	🟡	🟢
Uncertainty surrounding costs of healthcare coverage for our employees may limit growth opportunities for our organization	30	🟡	🟡	🟢

Strategic Risk Issues	2018 Rank	2018	2017	2016
Rapid speed of disruptive innovations and/or new technologies within the industry may outpace our organization's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	1	🔴	🟡	🟡
Regulatory changes and regulatory scrutiny may heighten, noticeably affecting the manner in which our products or services will be produced or delivered	4	🟡	🔴	🔴
Social media, mobile applications and other internet-based applications may significantly impact our brand, customer relationships, regulatory compliance processes and/or how we do business	11	🟡	🟡	🟡
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	12	🟡	🟡	🟡
Shifts in social, environmental, and other customer preferences and expectations may be difficult for us to identify and address on a timely basis	13	🟡	🟡	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organization	14	🟡	🟡	🟡
Our organization may not be sufficiently prepared to manage an unexpected crisis significantly impacting our reputation	15	🟡	🟡	🟡
Substitute products and services may arise that affect the viability of our current business model and planned strategic initiatives	17	🟡	🟡	🟡
Growth through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	21	🟡	🟡	🟡
Ease of entrance of new competitors into the industry and marketplace may threaten our market share	23	🟡	🟡	🟡
Performance vulnerabilities may trigger shareholder activism against our organization that may significantly impact our organization's strategic plan and vision	27	🟡	🟡	N/A

Operational Risk Issues	2018 Rank	2018	2017	2016
Resistance to change may restrict our organization from making necessary adjustments to the business model and core operations	2	●	●	●
Our organization may not be sufficiently prepared to manage cyber threats that have the potential to significantly disrupt core operations and/or damage our brand	3	●	●	●
Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues that have the potential to significantly affect our core operations and achievement of strategic objectives	5	●	●	●
Our organization's succession challenges and ability to attract and retain top talent may limit our ability to achieve operational targets	6	●	●	●
Ensuring privacy/identity management and information security/system protection may require significant resources for us	7	●	●	●
Inability to utilize data analytics and "big data" to achieve market intelligence and increase productivity and efficiency may significantly affect our management of core operations and strategic plans	9	●	●	●
Our existing operations may not be able to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, especially new competitors that are "born digital" and with a low cost base for their operations, or established competitors with superior operations	10	●	●	●
Risks arising from our reliance on outsourcing and strategic sourcing arrangements, IT vendor contracts, and other partnerships/joint ventures to achieve operational goals may prevent us from meeting organizational targets or impact our brand image	19	●	●	●
Uncertainty surrounding the viability of key suppliers or scarcity of supply may make it difficult to deliver our products or services	24	●	●	●
Our organization may face greater difficulty in obtaining affordable insurance coverages for certain risks that have been insurable in the past	29	●	●	●

Analysis Across Different Sizes of Organizations

The sizes of organizations, as measured by total revenues, vary across our 728 respondents, as shown below. The mix of sizes of organizations represented by respondents is relatively similar to the mix of respondents in our prior years' surveys. Like the prior year, about three-fourths of our respondents are in organizations with revenues between $100 million and $10 billion.

Most Recent Revenues	Number of Respondents
Revenues $10 billion or greater	65
Revenues $1 billion to $9.99 billion	235
Revenues $100 million to $999 million	318
Revenues less than $100 million	110
Total Number of Respondents	**728**

The overall outlook about risk conditions differs across sizes of organizations. We asked respondents to provide their overall impression of the magnitude and severity of risks their organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months, using a 10-point scale where 1 = "Extremely Low" and 10 = "Extensive." The two smallest size categories of organizations (those with revenues below $1 billion) both sense an increase in the magnitude and severity of risks for their organizations, while the two largest categories of organizations indicated that the magnitude and severity of risks is lower relative to the prior year. The smallest-sized organizations are the least concerned relative to organizations in the other size categories.

The majority of our respondents (553 of 728 respondents) are in organizations with revenues between $100 million and $9.99 billion. They believe that the overall magnitude and severity of risks is higher than organizations in the other two size categories. Respondents from the largest firms sense the greatest reduction in the magnitude and severity of risks.

Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	2018	2017	2016
Organizations with revenues $10 billion or greater	5.9	6.5	6.8
Organizations with revenues between $1 billion and $9.99 billion	6.1	6.6	6.4
Organizations with revenues between $100 million and $999 million	6.1	5.8	5.9
Organizations with revenues less than $100 million	5.5	5.4	5.8

Consistent with our findings related to the overall top 10 risks for 2018 for the full sample, concerns about the rapid speed of disruptive innovation and concerns about the ability to manage a cyber threat are included in the top five risks for each of the size categories of organizations. The sense that core business models may be altered by competitors that introduce new and innovative ways of doing business is on the minds of respondents across all size sectors. Many apparently view disruptive innovations as affecting traditional forms of doing business that impact all organizations, regardless of size. The digital revolution is real. Also, given all organizations are now heavily dependent on technologies, all sizes of organizations are concerned about cyber threats, which are here to stay.

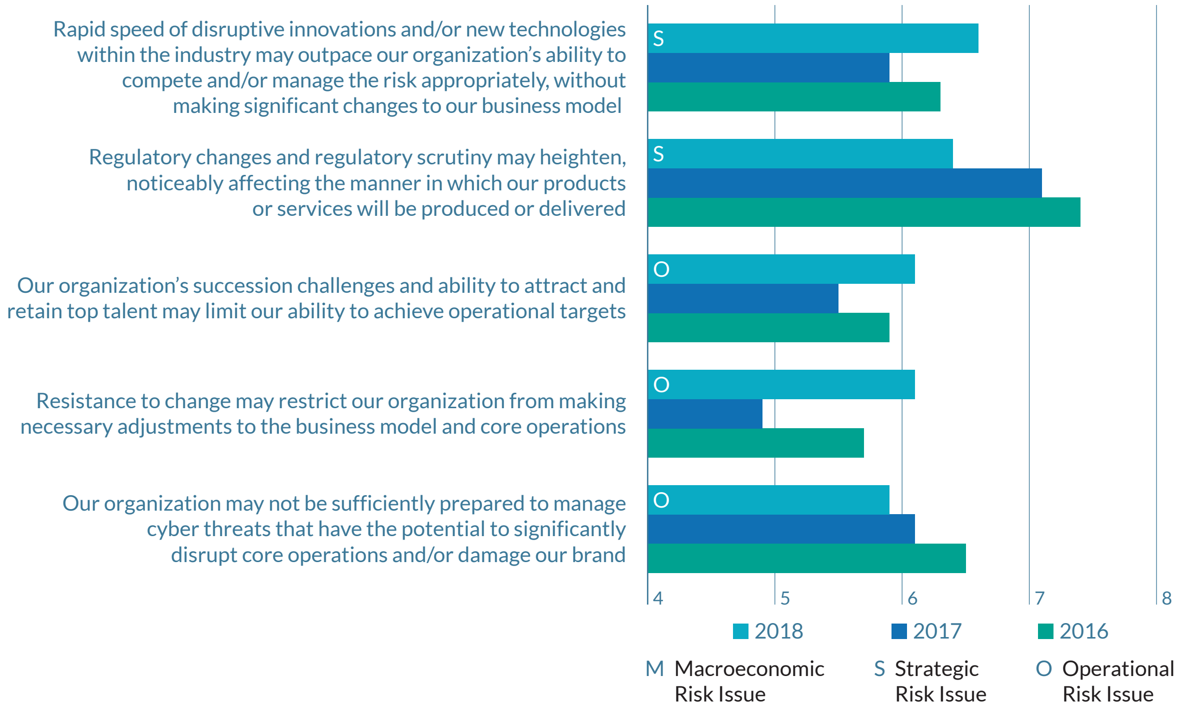
Resistance to change is a concern for all sizes of organizations, except those in the smallest category. As organizations grow in complexity, their ability to be nimble and adaptive is often reduced. Coupled with the concern about the impact of rapid disruptive innovation impacting business models, respondents are also concerned about limitations in their ability to quickly react when innovations emerge.

Regulatory changes and regulatory scrutiny continue to be a top five concern for most organizations, except those with revenues between $100 million and $999 million. Interestingly, the smallest organizations rated regulatory issues as their most significant risk. All organizations, except those in the largest category (those with revenues of $10 billion or more), rated concerns about their organization's culture not sufficiently encouraging the timely identification and escalation of risk issues as a top five risk. Both the largest and the smallest organizations are concerned about the organization's succession challenges and ability to attract and retain top talent and uncertainty surrounding political leadership impacting growth opportunities.

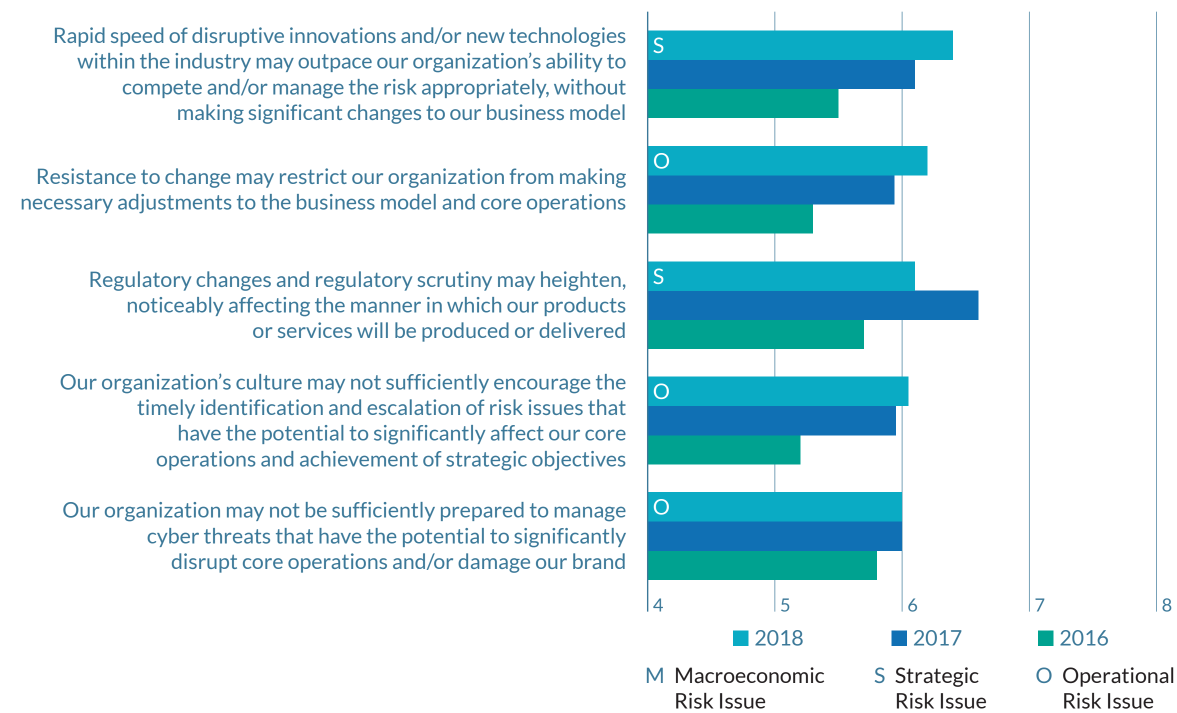
Except for the smallest organizations (those with revenues less than $100 million), all other sizes of organizations rated some of their top five risks as "Significant Impact" risks. The two largest categories of organizations (those with revenues of $1 billion or more) rated four of their top five risks as "Significant Impact" risks. That is in contrast to the full sample results, where only two of the 30 risks included in the 2018 survey are classified as "Significant Impact" risks. The next category of firms (those with revenues between $100 million and $999 million) rated two of their top five risks as "Significant Impact" risks. Thus, the overall risk profile for large organizations is noticeably higher relative to the smaller organizations.

The accompanying charts summarize the top-rated risks by size of organization. Only the top five risks are reported.

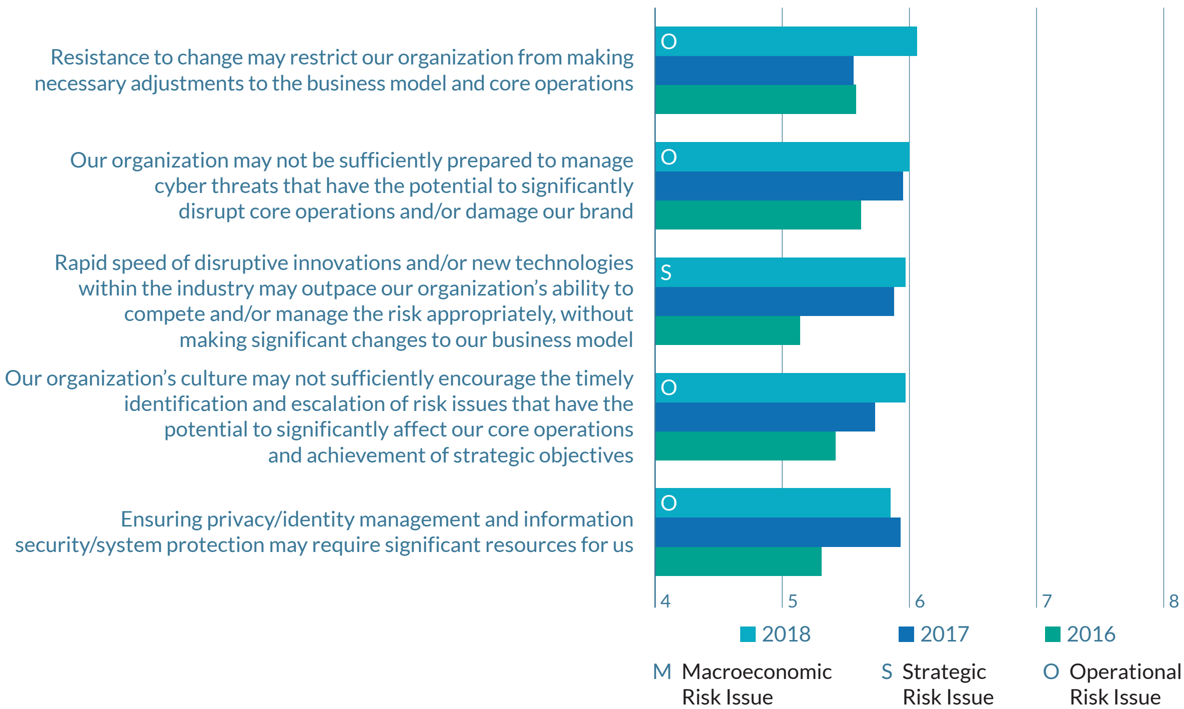
Revenues $10B or Greater



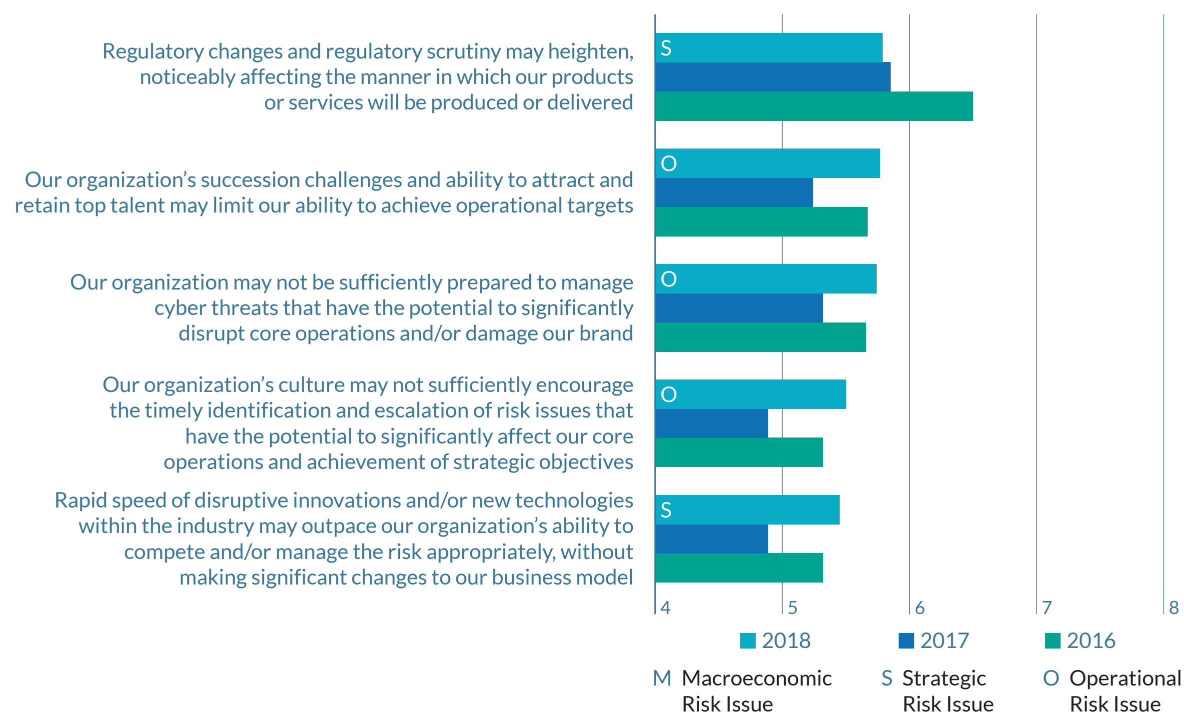
Revenues $1B to $9.99B



Revenues $100M to $999M



Revenues Less than $100M



Analysis Across Executive Positions Represented

We targeted our survey to individuals currently serving on the board of directors or in senior executive positions so that we could capture C-suite and board perspectives about risks on the horizon for 2018. Respondents to the survey serve in a number of different board and executive positions. The remaining respondents represent individuals currently serving in a variety of executive positions. We received responses from 86 members of a board of directors, and it is reasonable to expect that some CEOs and perhaps other C-level executives also serve on a board.

Executive Position	Number of Respondents
Board of Directors	86
Chief Executive Officer	31
Chief Financial Officer	89
Chief Risk Officer	202
Chief Audit Executive	102
Chief Information/Technology Officer	70
Other C-Suite[3]	90
All other[4]	58
Total Number of Respondents	**728**

To determine if perspectives about top risks differ across executive positions, we also analyzed key findings for boards of directors and the six executive positions with the greatest number of respondents: chief executive officer (CEO), chief financial officer (CFO), chief risk officer (CRO), chief audit executive (CAE), chief information/technology officer (CIO), and other C-suite executives.[5]

Similar to our analysis of the full sample and across the different sizes of organizations, we analyzed responses about overall impressions of the magnitude and severity of risks across the above types of respondents. Again, the scores in the table on the following page reflect responses to the question about their overall impression of the magnitude and severity of risks their organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months, using a 10-point scale where 1 = "Extremely Low" and 10 = "Extensive."

[3] This category includes titles such as chief operating officer, general counsel and chief compliance officer.

[4] These 58 respondents either did not provide a response or are best described as middle management or business advisers/consultants. We do not provide a separate analysis for this category.

[5] We grouped individuals with equivalent but different executive titles into these positions when appropriate. For example, we included "Vice President – Risk Management" in the CRO grouping and we included "Director of Finance" in the CFO grouping.

Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	2018	2017	2016
Board of Directors	6.4	5.5	6.0
Chief Executive Officer	5.9	6.0	6.3
Chief Financial Officer	6.3	6.3	6.1
Chief Risk Officer	5.5	6.3	5.9
Chief Audit Executive	6.4	6.1	6.1
Chief Information/Technology Officer	6.3	6.6	6.5
Other C-Suite	6.0	6.4	6.0

The overall impression among executives with respect to the magnitude and severity of risks in the environment is decidedly mixed. Board members and CAEs have significantly increased their 2018 expectations relative to 2017. In addition, these respondents appear to be most concerned, given they rated the magnitude and severity of risks for 2018 at the highest level among all executives. This increase in risk expectations may be the result of overall concern about how quickly business conditions and expectations for oversight are changing. However, CROs, CIO/CTOs and other C-suite executives have significantly lowered their future impressions. Interestingly, CROs and CIO/CTOs lowered their 2018 impressions below not only their 2017 ratings but also their 2016 ratings. Notably, the expectations of CEOs and CFOs have not changed much from 2017. Surprisingly, CEOs' overall impressions have significantly decreased since 2016, while their boards' impressions have significantly increased from 2016. This contrast in perspectives suggests there may be value in explicitly discussing and analyzing factors that might be influencing overall impressions about the risk environment among key leaders, especially at the highest level of the organization. Thus, enterprise risk assessments would benefit from the influx of multiple perspectives.

As discussed previously, to help identify differences in risk concerns across respondent type, we group all the risks based on their average scores into one of three classifications. Consistent with prior studies, we use the following color-coding scheme to highlight risks visually using these three categories. Below and on the following pages, Table 6 summarizes the impact assessments for each of the 30 risks for the full sample and for each category of executive using the following color code scheme:

- Significant Impact – Rating of 6.0 or higher
- Potential Impact – Rating of 4.5 – 5.9
- Less Significant Impact – Rating of 4.4 or lower

Table 6: Perceived Impact for 2018 Relative to Prior Years – by Role

Macroeconomic Risk Issues	Board	CEO	CFO	CRO	CAE	CIO/ CTO	Other C-Suite
Sustained low fixed interest rates may have a significant effect on the organization's operations	Significant	Potential	Potential	Potential	Less Significant	Significant	Potential
Economic conditions in markets we currently serve may significantly restrict growth opportunities for our organization	Significant	Potential	Potential	Potential	Potential	Potential	Potential
Anticipated increases in labor costs may affect our opportunity to meet profitability targets	Potential	Potential	Significant	Potential	Potential	Potential	Potential
Anticipated volatility in global financial markets and currencies may create significantly challenging issues for our organization to address	Potential	Potential	Potential	Potential	Potential	Potential	Potential
Uncertainty surrounding political leadership in national and international markets may limit our growth opportunities	Potential	Potential	Potential	Potential	Potential	Potential	Potential
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organization	Potential	Potential	Potential	Potential	Potential	Potential	Potential
Geopolitical shifts and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth objectives	Potential	Potential	Potential	Potential	Less Significant	Potential	Potential
Anticipated changes in global trade policies may limit our ability to operate effectively and efficiently in international markets	Potential	Potential	Potential	Less Significant	Less Significant	Potential	Potential
Uncertainty surrounding costs of healthcare coverage for our employees may limit growth opportunities for our organization	Potential	Potential	Potential	Less Significant	Less Significant	Potential	Potential

Strategic Risk Issues	Board	CEO	CFO	CRO	CAE	CIO/ CTO	Other C-Suite
Rapid speed of disruptive innovations and/or new technologies within the industry may outpace our organization's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	🔴	🟡	🔴	🔴	🔴	🟡	🟡
Regulatory changes and regulatory scrutiny may heighten, noticeably affecting the manner in which our products or services will be produced or delivered	🟡	🟡	🟡	🔴	🔴	🟡	🟡
Ease of entrance of new competitors into the industry and marketplace may threaten our market share	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Social media, mobile applications and other internet-based applications may significantly impact our brand, customer relationships, regulatory compliance processes and/or how we do business	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Shifts in social, environmental, and other customer preferences and expectations may be difficult for us to identify and address on a timely basis	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Our organization may not be sufficiently prepared to manage an unexpected crisis significantly impacting our reputation	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Growth through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organization	🟡	🟡	🟡	🟡	🟡	🟡	🟡

Substitute products and services may arise that affect the viability of our current business model and planned strategic initiatives	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Performance vulnerabilities may trigger shareholder activism against our organization that may significantly impact our organization’s strategic plan and vision	🟡	🟡	🟡	🟢	🟢	🟡	🟡

Operational Risk Issues	Board	CEO	CFO	CRO	CAE	CIO/ CTO	Other C-Suite
Resistance to change may restrict our organization from making necessary adjustments to the business model and core operations	🔴	🟡	🟡	🔴	🔴	🔴	🟡
Our organization may not be sufficiently prepared to manage cyber threats that have the potential to significantly disrupt core operations and/or damage our brand	🔴	🟡	🟡	🔴	🔴	🟡	🟡
Our organization’s succession challenges and ability to attract and retain top talent may limit our ability to achieve operational targets	🟡	🟡	🟡	🔴	🔴	🟡	🟡
Our organization’s culture may not sufficiently encourage the timely identification and escalation of risk issues that have the potential to significantly affect our core operations and achievement of strategic objectives	🟡	🟡	🔴	🟡	🔴	🟡	🟡
Ensuring privacy/identity management and information security/system protection may require significant resources for us	🟡	🟡	🟡	🟡	🔴	🟡	🟡
Inability to utilize data analytics and “big data” to achieve market intelligence and increase productivity and efficiency may significantly affect our management of core operations and strategic plans	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our organization may face greater difficulty in obtaining affordable insurance coverages for certain risks that have been insurable in the past	🔴	🟡	🟡	🟢	🟢	🟡	🟡

Risks arising from our reliance on outsourcing and strategic sourcing arrangements, IT vendor contracts, and other partnerships/joint ventures to achieve operational goals may prevent us from meeting organizational targets or impact our brand image	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Our existing operations may not be able to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, especially new competitors that are "born digital" and with a low cost base for their operations, or established competitors with superior operations	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Uncertainty surrounding the viability of key suppliers or scarcity of supply may make it difficult to deliver our products or services	🟡	🟡	🟡	🟡	🟢	🟡	🟡

Board members appear to have the most significant concern about risk issues, as reflected by their ratings of nine of the 30 risks at the highest impact level (red circles). CAEs were right behind board members, identifying seven of the 30 risks at the highest impact level. Surprisingly, CAEs also identified seven of the 30 risks as having the lowest impact level (rated lower than 4.5 and reflected by the green circles), resulting in the most variability among executives. CROs also showed variability in their ratings, identifying five risks as having highest impact and four risks as having lowest impact. Interestingly, CEOs rated all 30 risks in the middle category (i.e., "Potential Impact" risks), and CFOs rated 27 of the risks in the middle category.

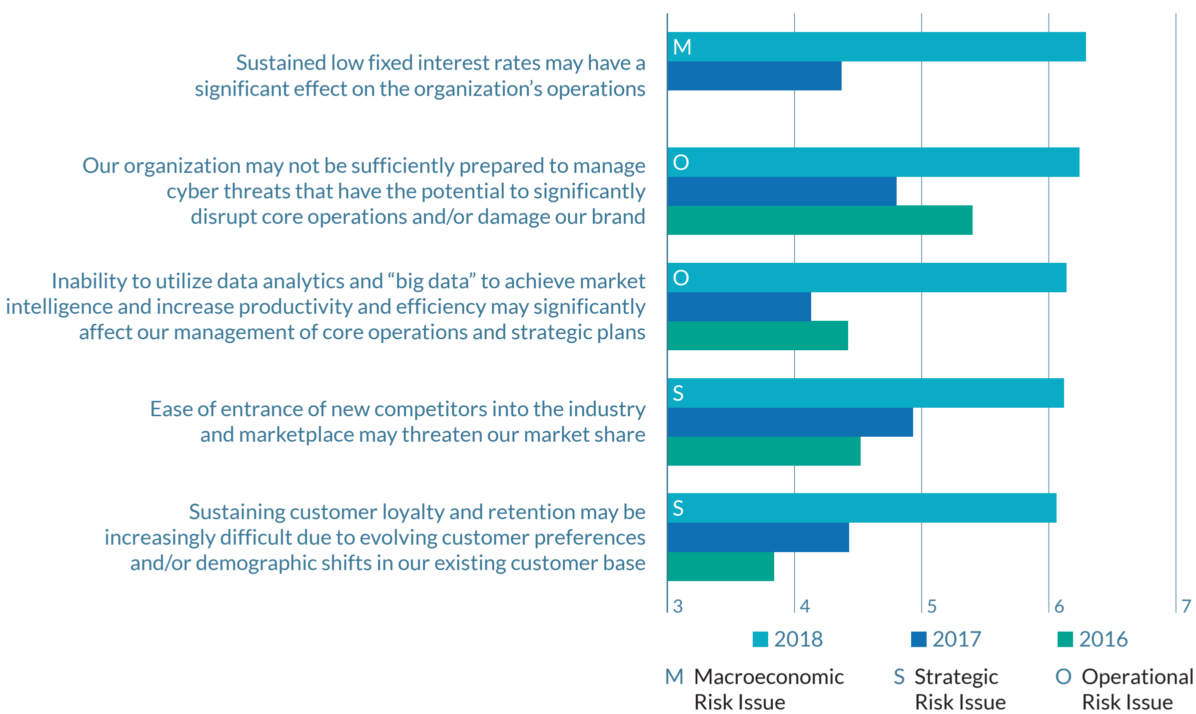
The charts on the following pages highlight the top five risks identified by each position. Of particular note is the observation that three of the top five risks for CEOs relate to strategic risk concerns, which coincides with the views held by board members and the group of executives in our Other C-Suite category. CAEs and CROs mostly pinpointed operational issues in their top five risks (three of the five risks). In contrast, CFOs and CIOs included more macroeconomic risks in their respective top five lists this year. This disparity in viewpoints emphasizes the critical importance of both the board and the management team engaging in risk discussions, given the different perspectives each brings to the table and the potential for a lack of consensus about the organization's most significant risks. Without clarity of focus, the executive team may be unaligned with the board on what the top risks are. Worse, they may not be appropriately addressing the most important risks facing the organization, thereby leaving the organization potentially vulnerable to certain risk events. The disparity reflected above may also reflect CEOs and board members taking more of a "big picture" view as other executives focus more on operational issues.

The impact of sustained low interest rates in the market was rated as the top risk by board members, and it made the top five risks for CIO/CTOs. However, only board members rated concerns about low sustained interest rates at the "Significant Impact" level, while CIO/CTOs rated this risk as a "Potential Impact" risk. These concerns could reflect any of a number of issues: unease over the uncertainty over central bank policy in the U.S. and other countries; the implications of a low interest rate environment on the future profitability of banks, the traditional business models of insurance companies and the viability of pension funds; the potential for deflation; and structural abuses in the economy due to the availability of cheap money. CEOs and CFOs also identified the economic risk of anticipated volatility in global financial markets as a top five risk.

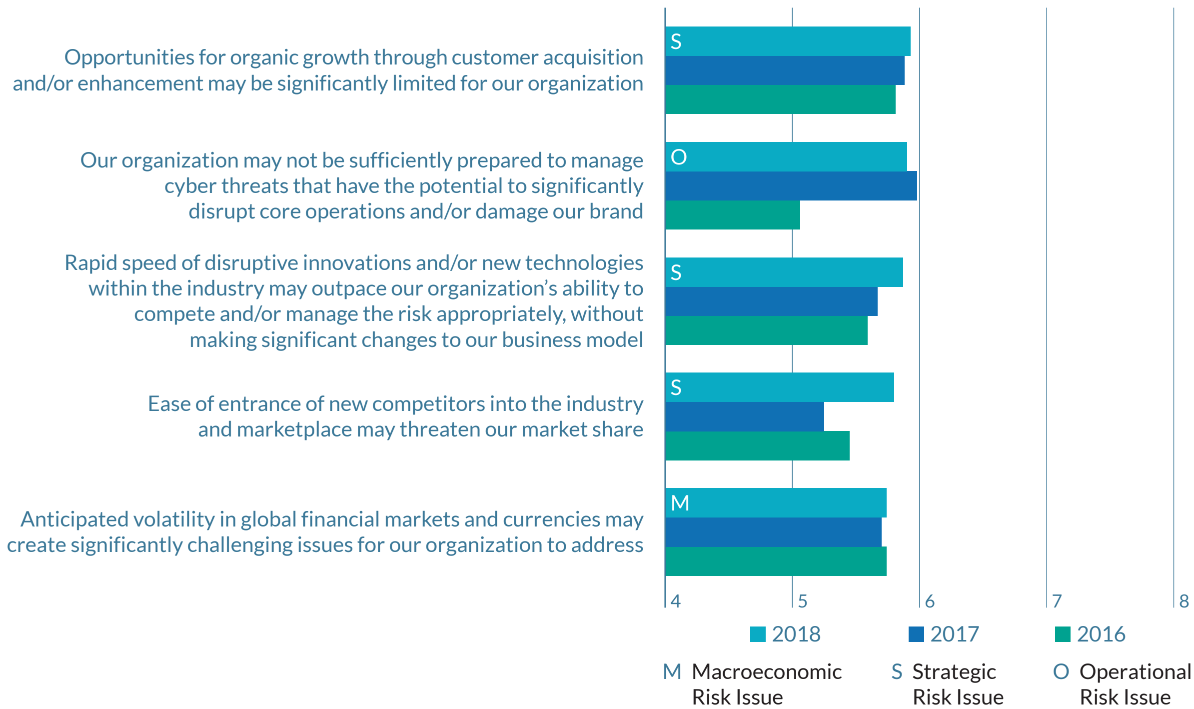
Among operational risks, board members, CEOs, CROs and CAEs all identified the risk of not being sufficiently prepared to manage cyber threats as a top five risk, with board members identifying it at the "Significant Impact" level. What was most surprising is that cyber threats were not included in the top five risk concerns for CIO/CTOs, who mostly focused on macroeconomic risk issues.

At the strategy level, both board members and CEOs identified the threat from new competitors into the industry as a top five risk. The next most identified strategic risk was regulatory change, which was identified by CROs, CAEs and Other C-Suite members.

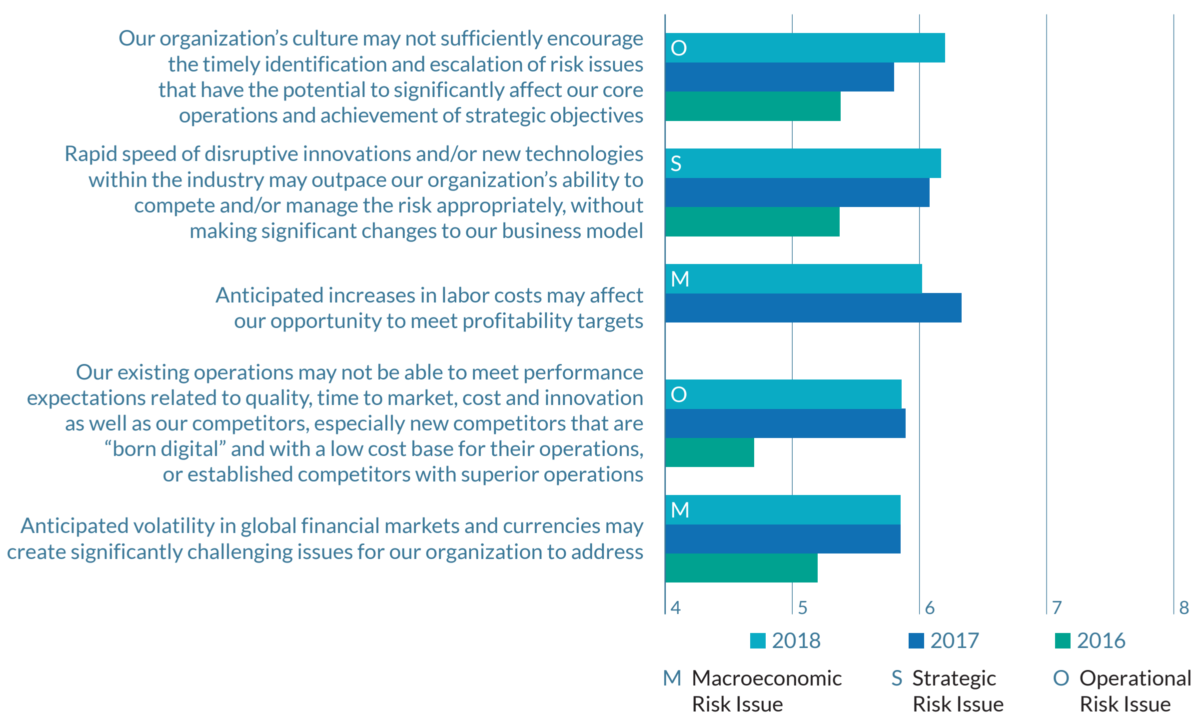
• • • *Board Members*



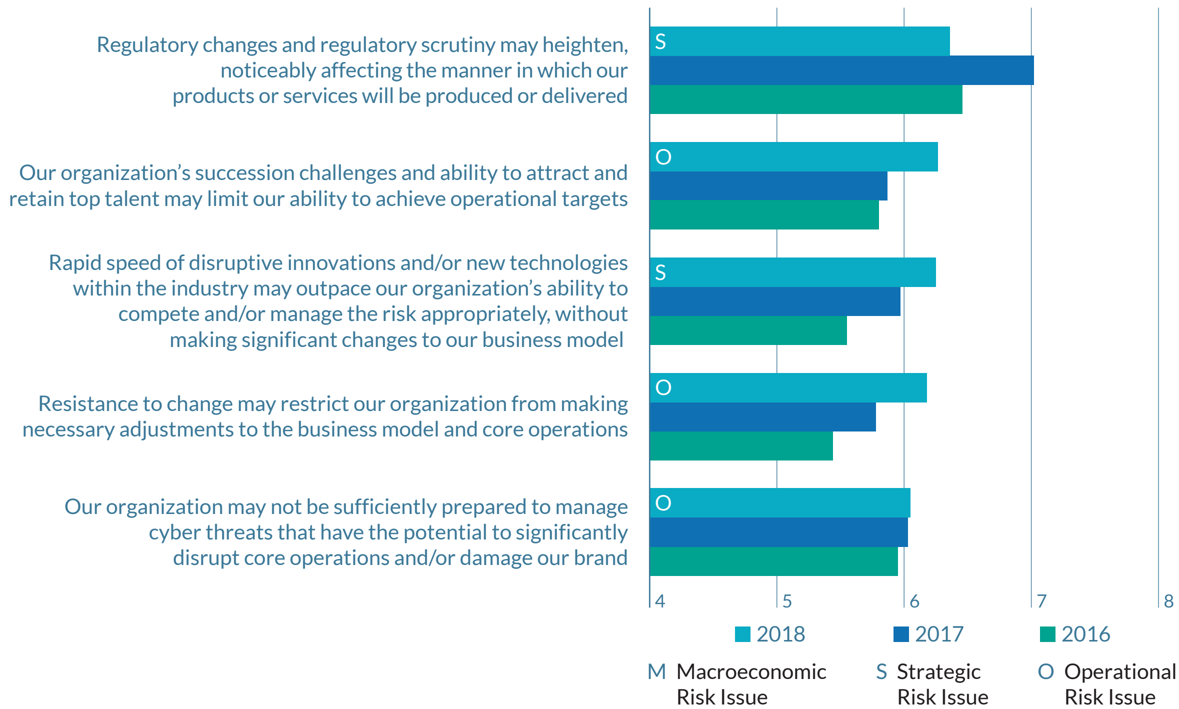
• • • *Chief Executive Officers*



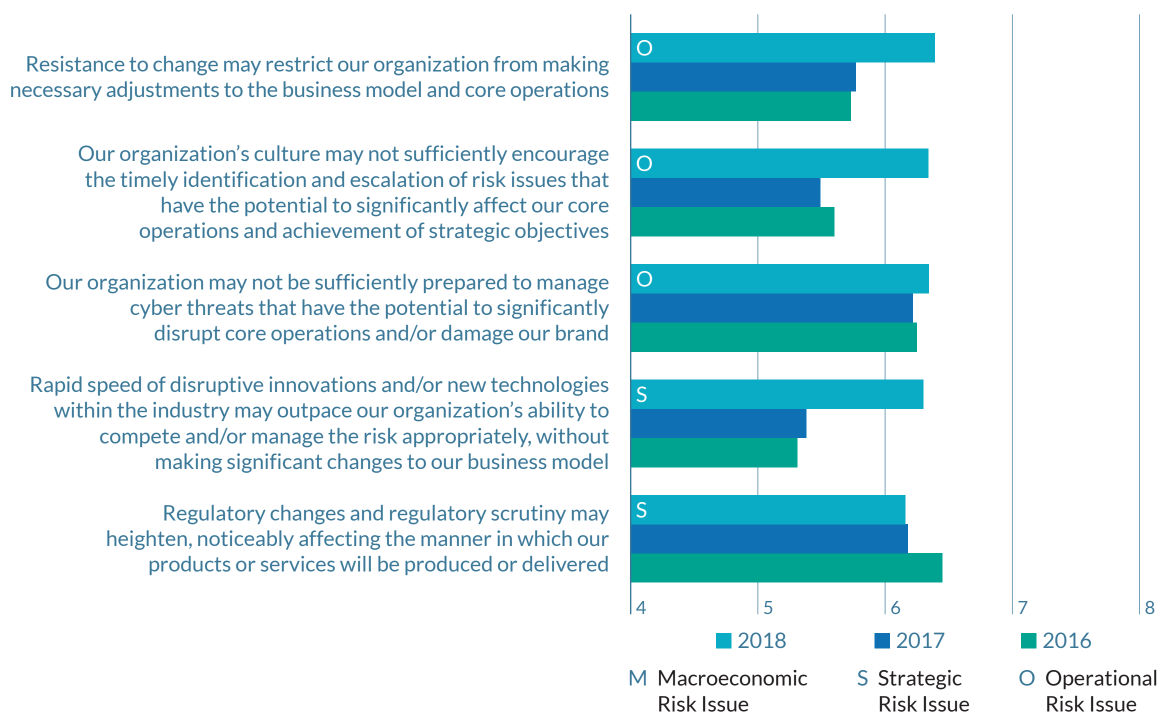
• • • *Chief Financial Officers*



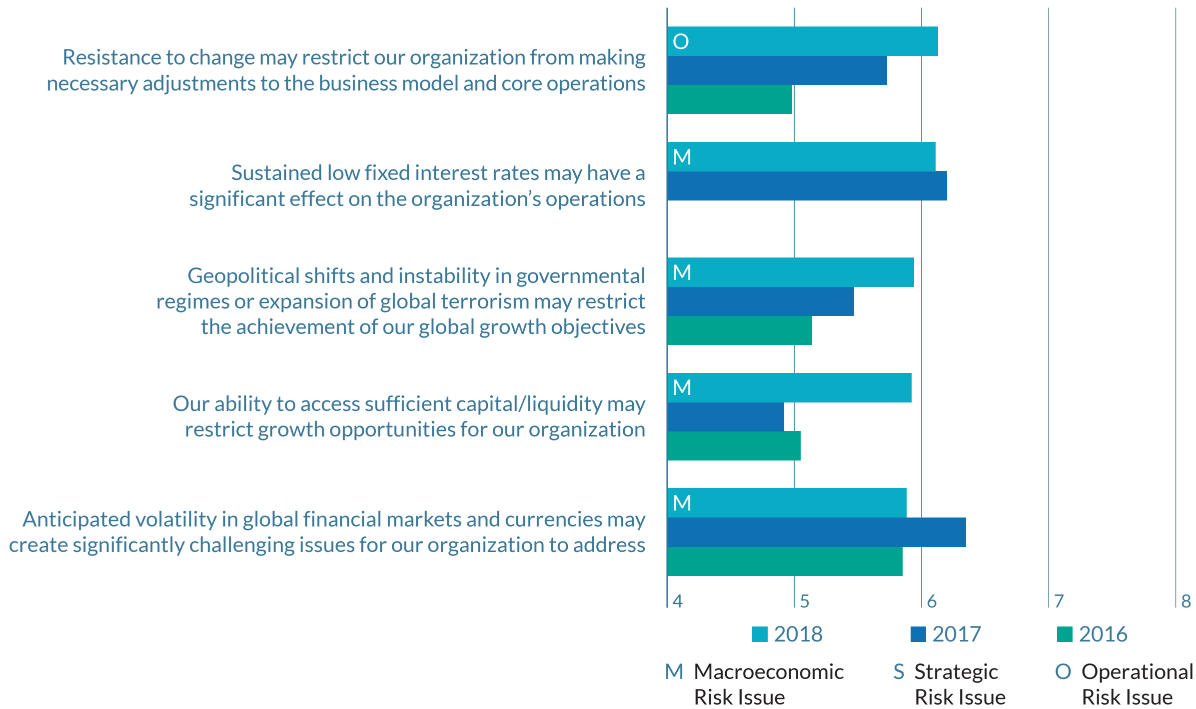
Chief Risk Officers



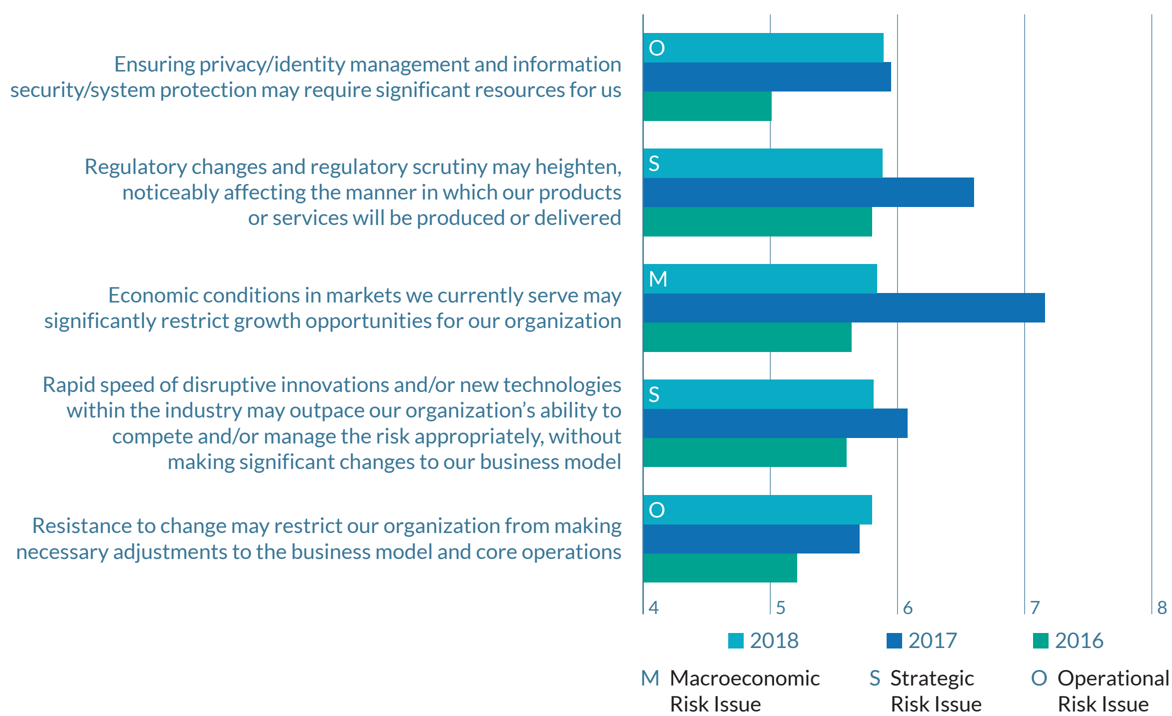
Chief Audit Executives



Chief Information/Technology Officer



Other C-Suite Executives



Industry Analysis

Respondents to our survey represent organizations in a number of industry groupings, as shown below:

Industry	Number of Respondents
Financial Services (FS)	243
Consumer Products and Services (CPS)	173
Manufacturing and Distribution (MD)	112
Technology, Media and Communications (TMC)	69
Healthcare and Life Sciences (HLS)	50
Energy and Utilities (EU)	37
Other industries (not separately reported)	44
Total Number of Respondents	**728**

We analyzed responses across the six industry groups to determine whether industries rank-order risks differently. Similar to our analysis of the full sample and across the different sizes of organizations and types of respondents, we analyzed responses about overall impressions of the magnitude and severity of risks across the above industry categories. Again, the scores in the table below reflect responses to the question about their overall impression of the magnitude and severity of risks their organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months, using a 10-point scale where 1 = "Extremely Low" and 10 = "Extensive."

Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	2018	2017	2016
Financial Services (FS)	5.8	6.5	6.0
Consumer Products and Services (CPS)	5.8	5.9	5.9
Manufacturing and Distribution (MD)	6.2	6.1	6.5
Technology, Media and Communications (TMC)	6.5	6.5	6.6
Healthcare and Life Sciences (HLS)	6.2	6.2	6.6
Energy and Utilities (EU)	5.7	6.5	5.9

While most industry groups sense that the magnitude and severity of risks affecting their organization are relatively the same in 2018 as compared to the prior year, surprisingly the Financial Services and Energy and Utilities industry groups saw the largest decrease in overall risk concerns during the most recent year. This is likely due to reduced concerns about some of the macroeconomic risks and reduced concern about the potential for increased regulatory change and regulatory scrutiny in 2018 relative to 2017.

The Technology, Media and Communications industry group reflects the highest overall concern related to the magnitude and severity of risks overall. Given rapid developments in technological advancements that continue to occur at a rapid pace, this industry group continues to experience significant change relative to the others.

Respondents in the Energy and Utilities industry group reflect the most volatility in overall risk concerns across the three years. After this industry group saw a significant increase in the overall risk environment from 2016 to 2017, the 2018 survey results reflect a slight moderation in the level of overall risk concern. This may be a result of the significant drop in oil prices in late 2016 that impacted operations for many in the industry during 2017. Many of those organizations made adjustments to their businesses that now align with the new normal of a low-price environment.

The 2018 levels of overall risk concern are mostly tracking in line with 2017 levels for the Consumer Products and Services, Manufacturing and Distribution, and Healthcare and Life Sciences industry groups.

Table 7 provides an overview of the significance and differences across industries in executive perspectives about each of the 30 risks rated in this study (categorized as macroeconomic, strategic and operational risk issues).

- Significant Impact – Rating of 6.0 or higher
- Potential Impact – Rating of 4.5 – 5.9
- Less Significant Impact – Rating of 4.4 or lower

• • • *Table 7: Perceived Impact for 2018 Relative to Prior Years – by Industry*

Macroeconomic Risk Issues	FS	CPS	MD	TMC	HLS	EU
Economic conditions in markets we currently serve may significantly restrict growth opportunities for our organization	🟡	🟡	🟡	🔴	🟡	🟡
Sustained low fixed interest rates may have a significant effect on the organization's operations	🔴	🟡	🟡	🟡	🟡	🟢
Anticipated volatility in global financial markets and currencies may create significantly challenging issues for our organization to address	🟡	🟡	🟡	🟡	🟡	🟡
Uncertainty surrounding political leadership in national and international markets may limit our growth opportunities	🟡	🟡	🟡	🟡	🟡	🟡
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organization	🟡	🟡	🟡	🟡	🟡	🟡
Geopolitical shifts and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth objectives	🟡	🟡	🟡	🟡	🟡	🟡
Anticipated increases in labor costs may affect our opportunity to meet profitability targets	🟡	🟡	🟡	🟡	🟡	🟢
Anticipated changes in global trade policies may limit our ability to operate effectively and efficiently in international markets	🟡	🟡	🟡	🟡	🟢	🟢
Uncertainty surrounding costs of healthcare coverage for our employees may limit growth opportunities for our organization	🟢	🟡	🟡	🟡	🟡	🟢

Strategic Risk Issues	FS	CPS	MD	TMC	HLS	EU
Rapid speed of disruptive innovations and/or new technologies within the industry may outpace our organization's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	🔴	🟡	🟡	🔴	🔴	🔴
Regulatory changes and regulatory scrutiny may heighten, noticeably affecting the manner in which our products or services will be produced or delivered	🔴	🟡	🟡	🟡	🔴	🔴
Shifts in social, environmental, and other customer preferences and expectations may be difficult for us to identify and address on a timely basis	🟡	🟡	🟡	🟡	🔴	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organization	🟡	🟡	🟡	🔴	🟡	🟡
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	🟡	🟡	🟡	🟡	🔴	🟡
Social media, mobile applications and other internet-based applications may significantly impact our brand, customer relationships, regulatory compliance processes and/or how we do business	🟡	🟡	🟡	🟡	🟡	🟡
Ease of entrance of new competitors into the industry and marketplace may threaten our market share	🟡	🟡	🟡	🟡	🟡	🟡
Our organization may not be sufficiently prepared to manage an unexpected crisis significantly impacting our reputation	🟡	🟡	🟡	🟡	🟡	🟡
Growth through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	🟡	🟡	🟡	🟡	🟡	🟡
Substitute products and services may arise that affect the viability of our current business model and planned strategic initiatives	🟡	🟡	🟡	🟡	🟡	🟡
Performance vulnerabilities may trigger shareholder activism against our organization that may significantly impact our organization's strategic plan and vision	🟡	🟡	🟡	🟡	🟡	🟡

Operational Risk Issues	FS	CPS	MD	TMC	HLS	EU
Our organization may not be sufficiently prepared to manage cyber threats that have the potential to significantly disrupt core operations and/or damage our brand	🔴	🟡	🟡	🔴	🔴	🔴
Resistance to change may restrict our organization from making necessary adjustments to the business model and core operations	🟡	🔴	🟡	🔴	🔴	🔴
Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues that have the potential to significantly affect our core operations and achievement of strategic objectives	🟡	🔴	🟡	🔴	🔴	🔴
Our organization's succession challenges and ability to attract and retain top talent may limit our ability to achieve operational targets	🟡	🔴	🟡	🟡	🔴	🔴
Ensuring privacy/identity management and information security/system protection may require significant resources for us	🟡	🟡	🟡	🔴	🔴	🟡
Our existing operations may not be able to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, especially new competitors that are "born digital" and with a low cost base for their operations, or established competitors with superior operations	🟡	🟡	🟡	🔴	🟡	🟡
Uncertainty surrounding the viability of key suppliers or scarcity of supply may make it difficult to deliver our products or services	🟡	🟡	🟡	🟡	🟡	🟡
Risks arising from our reliance on outsourcing and strategic sourcing arrangements, IT vendor contracts, and other partnerships/joint ventures to achieve operational goals may prevent us from meeting organizational targets or impact our brand image	🟡	🟡	🟡	🟡	🟡	🟡
Inability to utilize data analytics and "big data" to achieve market intelligence and increase productivity and efficiency may significantly affect our management of core operations and strategic plans	🟡	🟡	🟡	🟡	🟡	🟡
Our organization may face greater difficulty in obtaining affordable insurance coverages for certain risks that have been insurable in the past	🟢	🟡	🟡	🟡	🟡	🟢

There are many consistent viewpoints about the most significant risks across the six industries. Four of the six industry groups rated the risk related to the rapid speed of disruptive innovations and new technologies as a "Significant Impact" risk. Three additional risks — all in the operational risk category — were also rated as "Significant Impact" risks by four of the six industry groups. These three operational risks relate to concerns about managing cyber threats, resistance to change, and the ability of the organization's culture to identify and escalate risk issues. Concerns about the impact of regulatory changes and regulatory scrutiny, while lower than the prior year, are rated by respondents in three of the six industries as a "Significant Impact" risk. The same is true for the risk related to succession challenges and ability to attract and retain top talent.

The Healthcare and Life Sciences industry group has the highest level of risk concerns. Respondents in that industry group identified nine of the 30 risks as "Significant Impact" risks, with all but one other risk rated in the middle category of "Potential Impact" risks. The Technology, Media and Communications industry group, which has the highest overall impression about the magnitude and severity of risks with regard to reaching or exceeding targets in the coming year, rated eight of the 30 risks as "Significant Impact." While the Financial Services industry group saw a notable decline in the overall concern about the magnitude and severity of risks, respondents in that industry group still rated four of the 30 risks as "Significant Impact" risks (they rated six of 30 risks at that level in 2017).

The bar charts on the following pages report the top five risk exposures in rank order for each of the six industry groups. The 2018 results are presented in light blue. Recall that a risk with an average score of 6.0 or higher is considered a "Significant Impact" risk, while risks with average scores between 4.5 and 5.9 are "Potential Impact" risks and risks with average scores below 4.5 are "Less Significant Impact" risks. In addition, the bar charts provide the risk rating for the previous two years with 2017 in dark blue and 2016 in green.

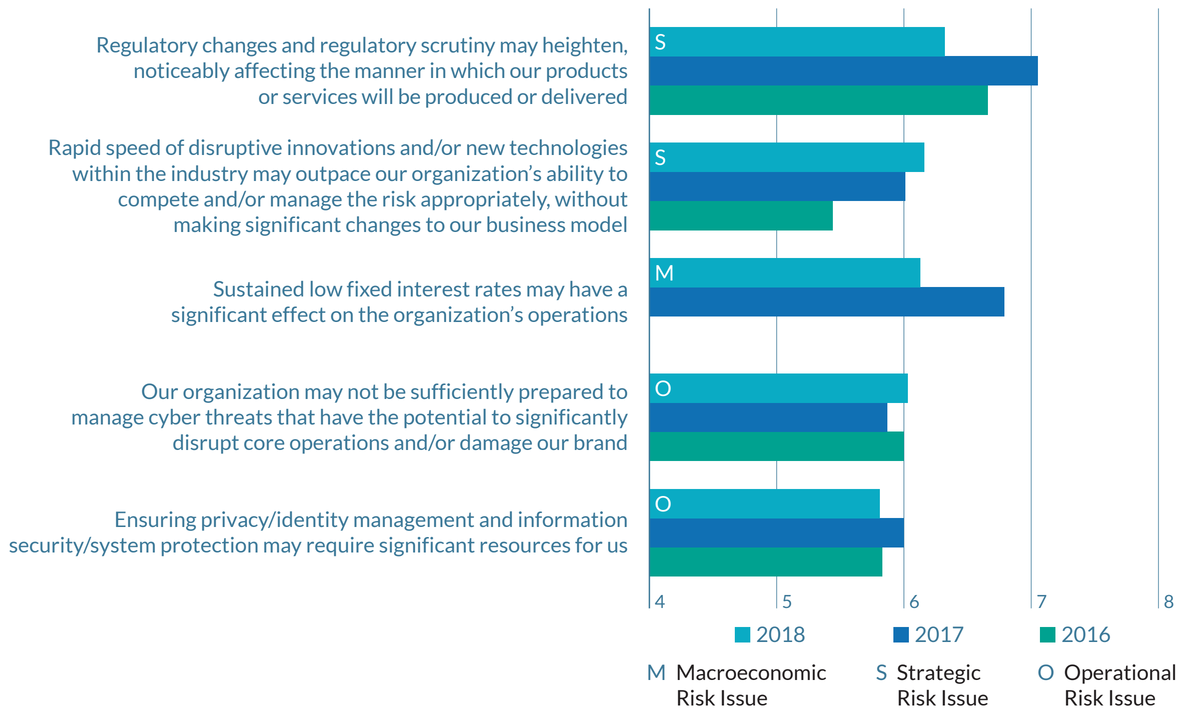
One noticeable observation from these charts is that the Technology, Media and Communications, Healthcare and Life Sciences, and Energy and Utilities industry groups rated all of their top five risks as "Significant Impact" risks for 2018. Also, while respondents in most industry groups have the overall impression that the magnitude and severity of risks is lower in 2018 relative to 2017, respondents generally believe that most of their top five risk concerns are higher in 2018 relative to 2017, as reflected by the bar graphs on the pages that follow.

No industry group has a risk with an average score that exceeds 7.0 on our 10-point scale. This is in contrast to last year, when respondents from both the Financial Services and the Energy and Utilities industry groups ranked the risk of heightened regulatory changes and regulatory scrutiny at above 7.0, while respondents in the Technology, Media and Communications industry group ranked the rapid speed of disruptive innovation at above 7.0 and respondents in the Manufacturing and Distribution industry group rated the risk of economic conditions significantly restricting growth opportunities at 7.0.

There are also differences in categories for the top five risks across the six industry groups examined. The Financial Services and Technology, Media and Communications industry groups are the only ones to include a macroeconomic risk in their top five risk concerns. The Consumer Products and Services and the Manufacturing and Distribution industry groups are mostly concerned about operational risks, given four of their top five risk concerns are in that category. In contrast, the Healthcare and Life Sciences industry group ranked three strategic risks among their top five risk concerns.

These noted differences in risk issues across the different industry groups highlight the importance of understanding industry drivers and emerging developments to effectively identify the most significant enterprise risks and emerging risk concerns. Following each bar chart by industry, we provide additional commentary about industry-specific risk drivers.

Financial Services



Commentary – Financial Services Industry Group

Regulatory pressures continue to be top-of-mind for financial services firms as regulatory change and scrutiny again tops the risk issues in the industry for the fourth year running, but the financial technology, or fintech, threat has surged into second place in the top risks rankings.

The financial services industry is being disrupted by the onward march of the financial technology, or fintech, sector. This trend is evidenced by a significant shift in the number of respondents highlighting the strategic risk posed by the rapid evolution of innovative technologies. Not only did this concern over the rapid speed of disruption rise three places since last year to become the second-highest ranked risk for financial services organizations, but the significance of this risk has increased substantially over the past two years. Financial firms are concerned about their ability to respond competitively and modify their business models in a timely manner to manage the enhanced risks.

This fear is pushing some financial institutions to advance the pace of their own digital innovation centers by partnering with fintech companies and is driving larger institutions to acquire many new fintech market entrants.[6] Risks are present with each of these options and specific emphasis needs to be placed on the importance of robust third party risk management when developing technology in partnership with non-traditional organizations that have less mature product development and regulatory compliance processes.[7]

Alongside this digital revolution is the ever-present and ever-growing threat to firms' cyber security, which again ranks in the top five risks for financial services firms. Concerns over preparedness for dealing with cyber events are increasing, while the implementation of several cyber security regulations and guidelines in the United States and around the world is keeping the cyber threat high on the agenda for chief executives and board members.

Another heightened risk for all financial institutions is privacy and the need to protect customer data. New regulations coming into force in 2018 — especially the European Union's General Data Protection Regulation (GDPR), which applies to all firms that store or use customer data, or even those firms who market to EU clients — have increased the focus of the compliance function on this area, requiring more resources over the past year.[8]

From a macroeconomic perspective, the industry appears to have priced in the strategic impact of interest rate rises already, while worries over the sustained low-interest environment on operations also appear to be alleviating, albeit only slightly. Due to the relative good health of the capital markets and the global economies, fears that economic conditions will curtail growth or that currencies and financial markets will be subject to volatility have reduced, with these macroeconomic risks falling out of the top five risks for 2018.

Financial services respondents indicate that the magnitude and severity of the risks their organizations will be facing over the next 12 months with respect to reaching or exceeding profitability (or funding) targets is falling. That said, more organizations indicated that they will be devoting additional time and resources to risk identification and management over the next 12 months.

[6] *Wealth and Asset Management 2022: The Path to Digital Leadership,* Roubini ThoughtLab: www.protiviti.com/Wealth2022.

[7] See Protiviti white paper, *Enabling Speed of Innovation Through Effective Third-Party Risk Management:* www.protiviti.com/3prm.

[8] www.protiviti.com/US-en/general-data-protection-regulation-gdpr.

• • • *Consumer Products and Services*

Commentary – Consumer Products and Services Industry Group

The top risk issues for 2018 identified by respondents from Consumer Products and Services organizations reflect the fiercely competitive and ever-changing business environment that these companies need to understand to thrive. Although we see a slight reduction in the magnitude and severity of risks that organizations in the industry group will be facing next year, there are significant increases in the scores of the top risk issues for the industry group, most notably around resistance to change, succession challenges and organizational culture, all of which rank as "Significant Impact" risk issues. The rapid speed of disruptive innovation, which includes digital transformation, jumped substantially as well, and hovers just below the "Significant Impact" risk level for 2018.

With regard to the overall impression of the risk environment, the slight drop in the risk score for 2018 is understandable, as last year there was substantial uncertainty globally that tied to the U.S. presidential election.

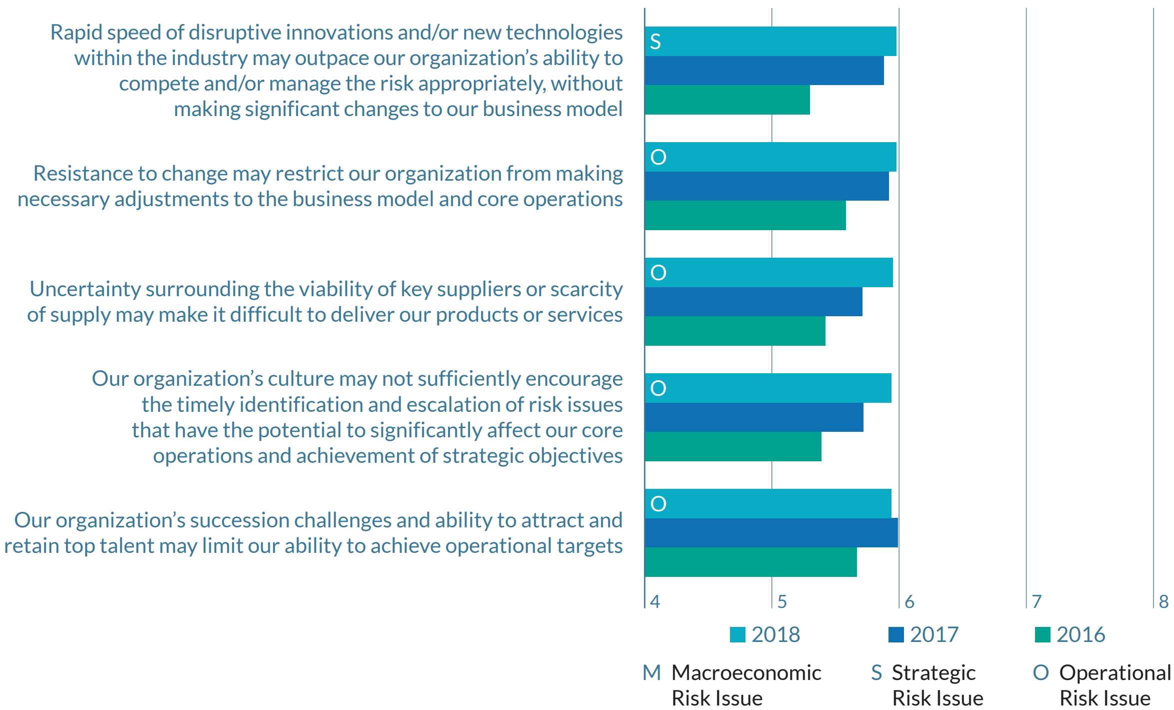
Disruptive innovation remains a major issue for organizations in this industry group, especially retailers. The industry is changing. Large digital players have begun to take over what traditionally was territory for brick and mortar businesses. Consumer Products and Services organizations, and retail companies in particular, are facing significant challenges to their long-term viability. In this environment, it is clear why board members and C-suite executives view resistance to change and succession challenges to be among their top risk issues. These organizations must embrace and implement change to compete with new digital and omnichannel players. To that end, succession plans and identifying the right talent with the right acumen to develop and implement new approaches is critical.

Organizations in this industry group have experienced their share of transformation over the past two years, with some companies restructuring or going out of business. There is clear recognition that some companies need to change and foster the right culture not only to embrace new strategies, but also to build the type of positive work environment that will attract and retain the right talent.

As an example, too many retailers are focusing on what was successful 10 to 15 years ago, rather than what can be successful today and in the future, considering that the bulk of retail customers fall into younger age brackets that have become accustomed to a different way of shopping. Those organizations that adapt will be able to excel in the long-term, as it is clear that certain major organizations have solved the omnichannel puzzle and are disrupting the industry. Boards and C-suite executives understand that new ways of thinking are required to respond to the rapid speed of disruptive innovation and new technologies. The good news is that many Consumer Products and Services organizations have a strong foundation of business and revenue. In large part, they are experiencing struggles in specific areas and markets as opposed to enterprisewide.

Cyber threats remain a critical risk issue for this industry group. Consumer Products and Services organizations recognize cyber security is an everyday part of their business. Yet, it is possible that some companies are becoming too comfortable with their cyber security and privacy measures. Managing cyber threats needs to be a constant area of focus and investment of time and resources, given the ever-changing threat landscape. The risk to reputation and brand is huge for any organization, but is especially true for these companies. One severe, high-profile security breach or hacking incident could mean the end of the organization. Boards and executives recognize that there should be a mandate to focus on this. It is understandable that cyber security is not viewed with quite the same significance as a risk issue as are resistance to change, succession challenges, organization culture and disruptive innovation, but it remains a highly important priority, especially as cyber attacks become more widespread and sophisticated.

• • • *Manufacturing and Distribution*



Commentary – Manufacturing and Distribution Industry Group

This year's list of top risks for Manufacturing and Distribution organizations is fundamentally different from 2017. Last year, a majority of the top risk issues were macroeconomic, whereas for 2018 most are operational. For the coming year, boards and executive leadership are likely to be much more focused on their internal operations.

Overall, board members and C-suite executives with Manufacturing and Distribution organizations see a higher magnitude and severity of business risks impacting their goals for 2018 relative to 2017. While still lower than two years ago, the perceived impact would likely be even higher if they were projecting over the next two to three years, as digital transformation and other disruptions take further hold across all industries.

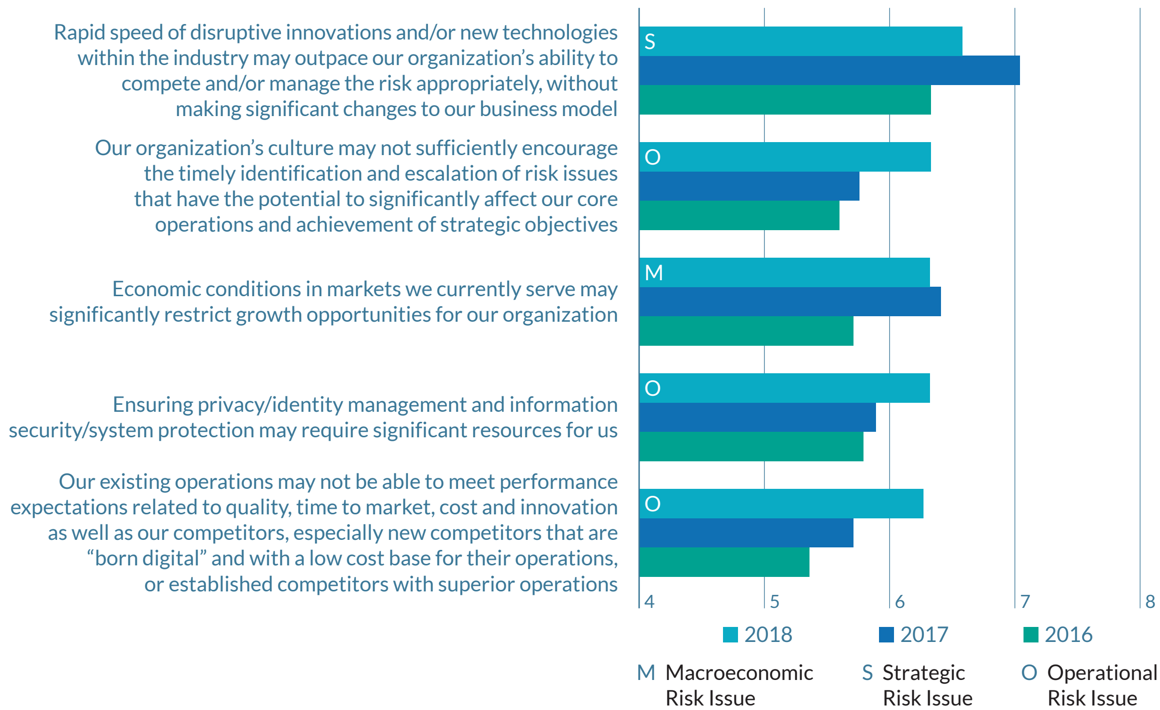
Not surprisingly, the rapid speed of disruptive innovations and new technologies represents the top risk issue, along with resistance to change in the organization. Digitalization is viewed as the fourth industrial revolution and is the new buzzword for Manufacturing and Distribution companies, thus the increased rating over the last two years. New business models must emerge to keep pace, introducing significant changes to organizations. Companies are moving from solely selling products to bundling their products with services to retain or gain market share, or even guaranteeing satisfactory outcomes to potential customers. For example, a manufacturer of industrial machines may embed diagnostic technology to bundle maintenance services with their products to decrease downtime for their customers.

With regard to resistance to change in the organization, this risk concern has increased slightly from last year, but more significantly from 2016. Manufacturing and Distribution organizations understand that changes are needed in the short- and long-term to remain competitive. Their ability to embrace these changes could be the difference between a successful future and being left behind.

While always on the industry's radar, the uncertainty surrounding the viability of key suppliers or scarcity of supply is now a top five risk issue, having increased noticeably in significance since 2016. The optimism created by digitalization and a pro-business environment is countered by the pervasive challenge of being able to produce goods in a highly dependent global supply chain, which has been impacted by natural disasters this year, as well as bracing for potential changes in global trade agreements.

Like most other industry groups, the organization's culture and ability to identify and escalate issues is a top risk for Manufacturing and Distribution companies, ranking very close to the other risks in the top five. Culture remains a much-discussed topic in the boardroom. Directors are particularly focusing on whether the organization's tone at the top is reaching down into the rest of the organization to achieve a strong tone in the middle and operational excellence at the bottom, which is where culture problems can create lasting reputation and brand damage.

As for succession challenges and the ability to attract and retain top talent, this is the only consistent top five risk issue year-over-year for Manufacturing and Distribution companies — and it is interrelated to the above risks. Board members and C-suite executives with Manufacturing and Distribution companies are well aware that they need the right talent in their organizations to support digital transformation, embrace important long-term changes the organization needs, and build and sustain the right organizational culture. Low unemployment rates are exacerbating a competitive market. At the same time, the organization itself needs to be committed to disruptive innovation to attract and retain talent. No one wants to work for a company with its best days behind it.



Commentary – Technology, Media and Communications Industry Group

Again this year, the rapid speed of disruptive innovation and new technologies outpacing an organization's ability to compete and manage that risk appropriately ranks as the top risk issue for the Technology, Media and Communications industry group. This confirms that innovation, emerging technologies and digitalization remain front-and-center priorities for board members and C-suite executives.

Digital transformation is a pervasive theme and a top risk issue for Technology, Media and Communications companies, as evident in the risk issues for rapid speed of disruptive innovation, organizational culture and existing operations not being able to meet performance expectations. The risk to an organization of being disrupted by companies "born digital" is a constant threat for this industry group.

For example, "born digital" players launch on cloud-based systems and have no need to transition to legacy systems. They have agile processes in place to facilitate faster decision-making and action. Consider the challenges of digital transformation by a company that has possibly decades of legacy systems and processes in place, compared with a digital native company that does not need to undergo any such transition. Digital native companies can dedicate their talent to focus constantly on strategy and product innovation.

Corporate culture made a significant jump in the risk score this year and is a key part of innovation and digital transformation. Culture is often the critical ingredient that enables organizations to attract and retain top talent to foster growth more effectively.

However, the importance of corporate culture extends well beyond innovation. In 2017, the National Association of Corporate Directors (NACD) Blue

Ribbon Commission published a report on culture as a corporate asset. In its report, the NACD notes that corporate culture can no longer be considered as a "soft issue" by management and boards. A company's culture has a lasting impact on organizational performance and reputation, and the oversight of culture must be a key board responsibility, as it is inextricably linked with strategy, CEO selection and risk oversight.[9]

There have been several recent, well-documented culture issues within Technology, Media and Communications companies. Boards understand that if a company's brand or reputation is harmed due to a bad culture, the impact will be swift and possibly irreversible. Conversely, a strong corporate culture is a tremendous asset to the organization in terms of recruiting, retention, reputation and brand image. The position of the organization's culture as a top risk issue for 2018, together with its significant increase in score, strongly suggests that board members and C-suite executives see the need to determine how culture can be better supported, possibly even as a higher priority than achieving short-term financial gains. Boards and management should consider culture-related measures and approaches that make sense in achieving improvements within their organization.[10]

With regard to privacy and information security, organizations in this industry group remain aware of the risks and dangers that breakdowns in these areas pose. Unfortunately, there are still organizations that look at privacy and security as a cost/benefit equation, rather than an issue that could create lasting long-term damage in an organization in the event of a breach or hack. It is important not to look solely at the short-term financial costs or benefits around security, but rather view security as a long-term investment in the organization.

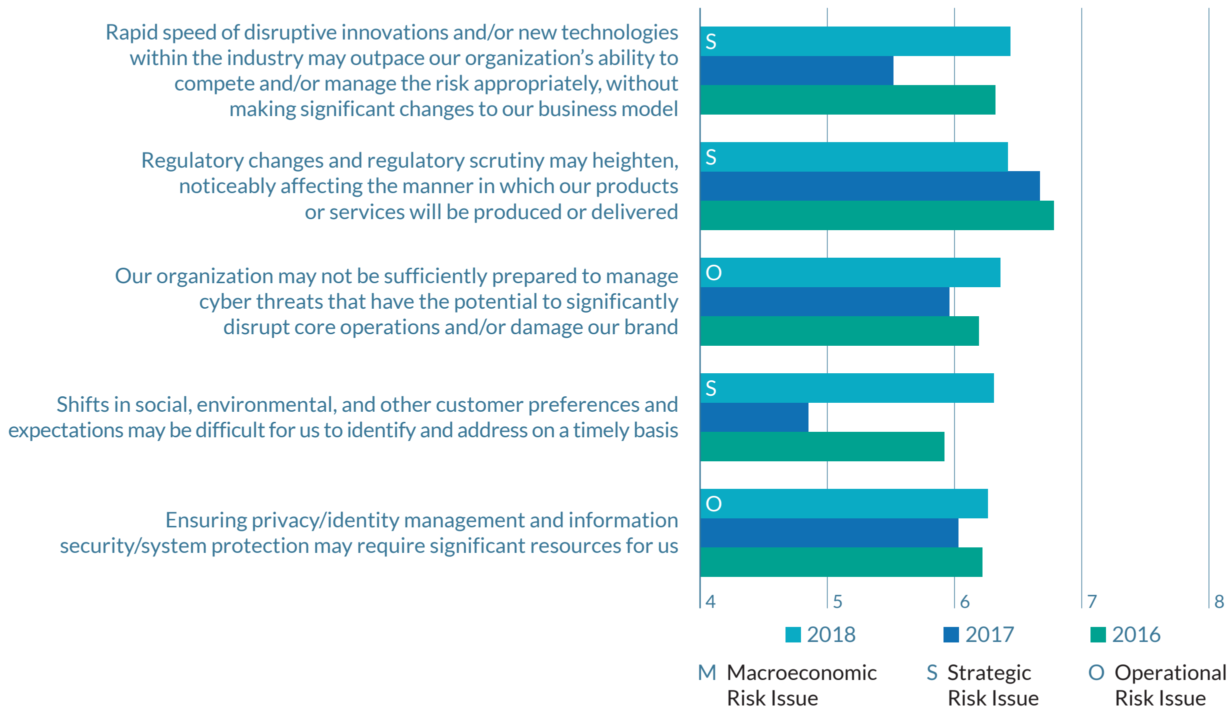
From multi-factor authentication to facial recognition, new technologies may facilitate even greater security. Companies need to see the value in these investments to ensure their organizations, as well as the data of their customers and clients, remain safe and secure. When boards and executives consider the deep long-term brand damage that can come from a privacy or security breach, they will recognize that sufficient resources need to be devoted to identifying and managing these risks.

Finally, economic conditions remain a vital risk issue for Technology, Media and Communications organizations to monitor and address. There is significant uncertainty in the global market, created by issues including, but not limited to, Brexit in the European Union, potential changes in trade agreements between the United States and other nations, and the possibility of recessionary market trends.

[9] Source: NACD Blue Ribbon Commission Report on Culture as a Corporate Asset, 2017, www.nacdonline.org/Store/ProductDetail.cfm?ItemNumber=48252.

[10] For more on this topic, see "Board Oversight of Reputation Risk," *Board Perspectives: Risk Oversight*, Issue 83: www.protiviti.com/US-en/insights/bpro-issue-83.

• • • *Healthcare and Life Sciences*



Commentary – Healthcare and Life Sciences Industry Group

The recent acceleration of digital technology and connectivity within healthcare has led to significant improvements in patient care delivery, more effective population health management and better patient outcomes. According to data from the Centers for Medicare and Medicaid Services, more than 95 percent of acute care hospitals and nearly 80 percent of office-based physicians have adopted Certified Electronic Health Record Technology. Combined with the increasing focus on disruptive innovations in areas of virtual care, telehealth, artificial intelligence and the Internet of Things, an abundance of new data is becoming available to healthcare providers. While this creates a window of opportunity for organizations to enhance competitive advantage by maximizing the use of information to provide more efficient, higher quality care to patients, additional risks are also being introduced and proactive management of those risks is more imperative than ever before. The reality is that healthcare organizations are behind other industries in terms of having robust digital strategies in place and being significantly mature in their digital capabilities. This reality presents a challenge for the industry because in the coming years the way that care is provided, along with how information and technologies are utilized, will be vastly different than today.

There has been a dramatic shift, not only trending upward, but also a difference in how risks are now perceived by healthcare C-suite and board members. One of the risks moving from a moderate to a significant risk this year is "shifts in social, environmental, and other customer preferences and expectations."

As population health and value-based payment models begin taking center stage, there is a shift from the providers having control over price and quality of care to patients having ultimate control based on their ability to view provider quality scores and perform comparisons in order to make more informed decisions about who will provide their care. Also, with the generational shift to where millennials are now active decision-makers, they have different demands and require new approaches for receiving and obtaining care, which at the moment is difficult for providers to identify and be flexible enough to address on a timely basis.

As part of the Quality Payment Program (QPP) that was implemented as a provision of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), providers need to have strategic objectives aimed at improving health outcomes, promoting smarter spending, minimizing burden of participation, and providing fairness and transparency in operations. In addition, providers have to focus on improving beneficiary outcomes and engaging patients through patient-centered Advanced Alternative Payment Models and Merit-Based Incentive Payment System policies. Furthermore, providers also have to concentrate on promoting program understanding and maximizing participation through customized communication, education, outreach and support that meet the needs of the diversity of physician practices and patients, especially the unique needs of small practices. With the changing roles and responsibilities of both non-clinicians and clinicians, organizations should also be rethinking their recruiting, training and development models to empower and engage their workforce to optimize the quality of care and enhance customer experience.

There will continue to be uncertainty about the future of the Affordable Care Act (ACA), which makes it very difficult to identify and address the associated risks both from the provider and patient standpoint. New technologies and innovations in computing and big data services are changing the way health information is recorded and delivered between patients and providers. Electronic health records, clinical documentation tools and telemedicine are changing the way that providers collect and consume health information regarding their patients, as well as patient demands for the consumption of and access to their data. In this current environment with new technologies and consumption of patient data, there are also unknown cyber security risks and questions about the ability of providers to identify and address these risks.

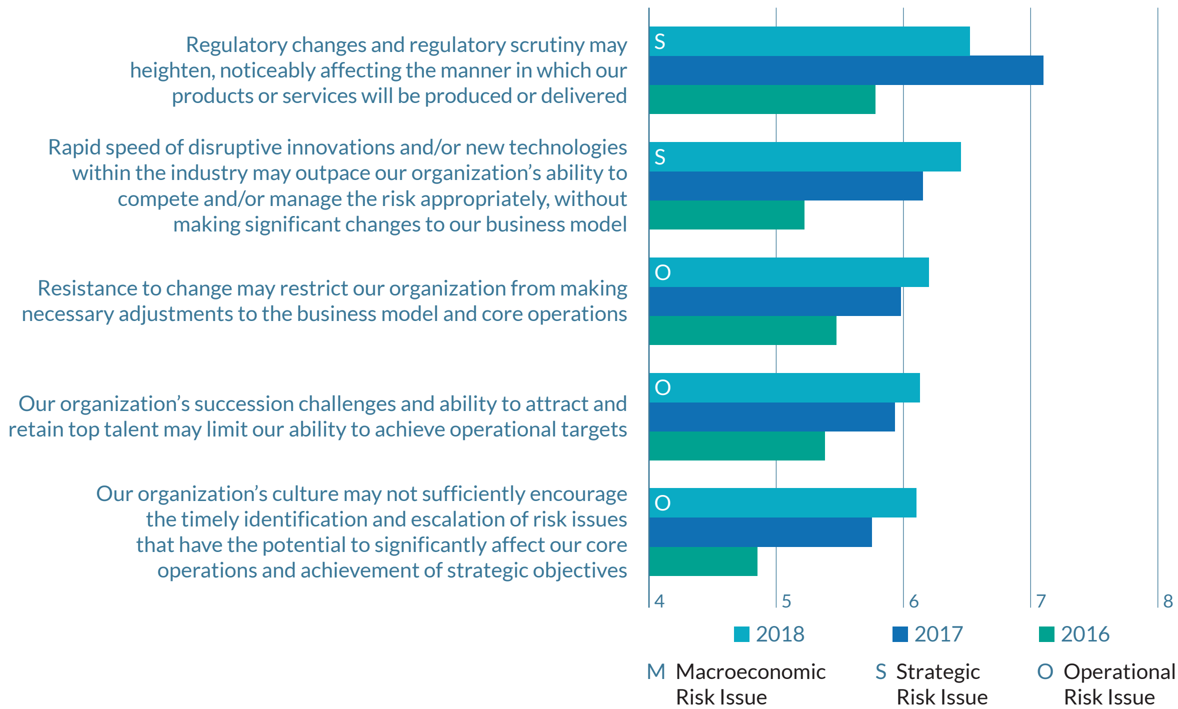
Based on the variables at play, it is prudent for providers to rethink their business models to maximize their efficiencies and bolster their organizations' preparedness and readiness models. This should include implementing, monitoring and testing internal controls to protect patient data to make sure those controls are working as intended.

As for the regulatory landscape, it appears to be trending downward slightly in the United States as a concern from prior years. This downward trend is likely due to an increased understanding of healthcare reform from the ACA; unsuccessful repeated attempts to repeal and replace or overhaul the ACA; less disruptive, incremental changes to regulations; and increased emphasis on effective compliance programs. However, the cost of staying on top of the regulatory environment has increased in part by government agencies imposing significant fines and take-backs for fraud, waste and abuse violations. With the collaboration between various government agencies (e.g., OIG, CMS, OCR, DOJ), the focus and scope of enforcement activities continue to expand (e.g., HIPAA audits, telehealth services, Stark Law and Anti-Kickback Statutes). Considering the Yates Memo and other enforcement clarifications, it is likely that the trend of increased and evolving enforcement will continue.

Finally, on a similar note, cyber threats are expanding in frequency, scale and impact at an alarming rate within the healthcare industry. This cyber threat growth is attributed to the increase in the number and advanced capabilities of the threat actor, the expansion in the threat surface through explosive growth in use of technology (e.g., Internet of Things, personal wearables, medical devices) and the seamless interconnectivity between technologies. These constantly evolving cyber threats may expose healthcare organizations to cyber attacks that can potentially impact patient care delivery, safety and privacy. Many healthcare providers need additional, immediate improvements to address associated risks. Unfortunately, this new risk environment is also compounded significantly by an overall shortage of resources. Whether faced with budgetary constraints that limit the ability to implement sufficient tools, technologies and processes, and/or faced with the lack of qualified security professionals to sufficiently prepare the organization to mitigate the onslaught of attacks, many healthcare organizations are not prepared to effectively manage cyber threats today and beyond. Making matters more complicated, associated mitigation activities are not one-time efforts. As existing threats evolve and new threats emerge on a seemingly daily basis, healthcare organizations must dedicate significant resources to staying at least one step ahead.

Healthcare organizations wishing not to be left behind, or not to be exposed to significant breaches and cyber attacks, will need to implement flexible and forward-thinking strategies that allow for nimble business models that adapt to the ever-changing environment while proactively managing risk along the way.

• • • *Energy and Utilities*



Commentary - Energy and Utilities Industry Group

Historically in our survey, the Energy and Utilities industry group tends to have relatively consistent results. However, there are a number of notable changes for 2018. Specifically, succession challenges and organizational culture have jumped into the top five list of risks for 2018, while economic conditions and opportunities for organic growth dropped from the top five.

In assessing the results for how board members and C-suite executives in this industry group view the overall risk environment their organizations will be facing in 2018, there was a significant drop from 2017. This is likely a result of welcome stabilization in oil prices globally, providing some comfort to oil and gas operators as well as other organizations in the broader Energy and Utility industry group.

Regulatory changes and regulatory scrutiny remains the top risk issue for Energy and Utility organizations, though there is a notable drop in the risk score for 2018 compared to the prior year. This is understandable given a new U.S. administration that is viewed to be favorable to these organizations. Yet, there remains a substantial level of uncertainty, as regulatory change unfolds slowly, which can have a detrimental effect if the regulations impact operations. That said, at least in the short-term, decreases in the pace of regulations have provided breathing room for this industry group.

Similar to other industries, the rapid speed of disruptive innovation and new technologies now represents a "Significant Impact" risk issue for Energy and Utility organizations. This issue has increased significantly over the past two years and is likely due to the industry's relatively slow adoption of digital trends in comparison to other industries, along with the recent rapid evolution of digital technologies. Energy executives are increasingly becoming more comfortable and those organizations that make swift changes first will reap the benefits and move ahead of their competitors by adopting new technologies such as smart meters, connected sensors, field automation technology, mobile capabilities, advanced analytics and modeling.

Closely related to the rapid speed of disruptive innovation is resistance to change that can restrict the organization's ability to adjust the business model and core operations. For Energy and Utility companies, changes the organization needs to make can be viewed as fundamental business shifts. The industry has a "tried and true" mentality and can be slow to adapt to new technologies and other innovations, as noted above. Couple that with persistently low commodity prices and many organizations remain unwilling to implement major changes due to the investments required.

With regard to succession challenges and the ability to attract and retain talent, this is another key risk issue that has increased over the last few years for Energy and Utility companies. There are a few likely factors for this, including the competition for top talent in emerging markets and the scarcity of new talent. Growth in other industries in recent years (such as technology) has impacted the hiring pool of top engineers, accountants and other professionals. Additionally, the drop in commodity prices starting in 2014 resulted in key professionals leaving the industry, and recent statistics have also shown that fewer college students are seeking careers in the industry.

Organizational culture and the ability to identify and escalate risk issues in a timely manner has reached the "Significant Impact" level for 2018, whereas just two years ago its risk score was much lower in the survey. Like organizations in other industry groups, there is growing awareness of the need to have the right culture in the company to attract and retain the right talent, as well as to avoid reputation and brand damage that can create long-term harm to the organization. Only recently have organizations taken on more enterprise risk management (ERM) efforts to challenge their thinking from a higher-level strategic position for the business (that is, not having mechanisms in place to identify something that is deemed low impact but really has reputational effects that could damage the company).

Analysis of Differences Between Public and Non-Public Entities

Participants in the survey represent three types of organizations: publicly traded companies (288 respondents), privately held for-profit entities (304 respondents), and not-for-profit and governmental organizations (136 respondents).

We analyzed responses across these three types of entities to determine whether organizational types rank-order risks differently. Similar to our analysis summarized earlier in this report, we analyzed responses about overall impressions of the magnitude and severity of risks across the three organizational type categories. Again, the scores in the table below reflect responses to the question about their overall impression of the magnitude and severity of risks their organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months, using a 10-point scale where 1 = "Extremely Low" and 10 = "Extensive."

Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	2018	2017	2016
Public Companies	6.1	6.6	6.3
Privately Held For-Profit Companies	6.0	6.1	6.2
Not-for-Profit and Governmental Organizations	5.5	5.8	5.7

Overall, the magnitude and severity of risks for all three organization types decreased from 2017 and are also below the 2016 results. Public companies saw the largest decrease in overall risk levels for 2018, although they still view 2018 overall as a "Significant Impact" (above 6.0). However, looking at the responses in total, we see a cooling off in overall risk concerns for the full sample in 2018.

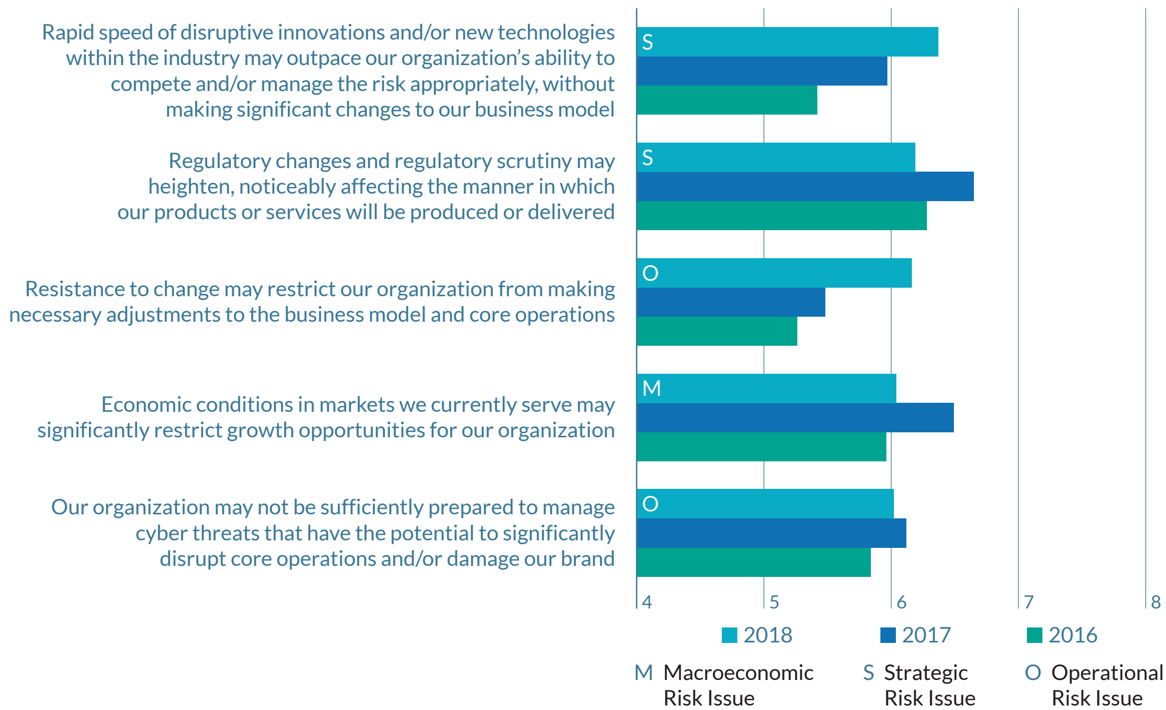
Surprisingly, even though overall impressions of the magnitude and severity of risks declined from 2017, all types of organizations rated many of their top five risks for 2018 as more significant than 2017. In fact, public companies and not-for-profit and governmental organizations each rated all five of their top risks as having a "Significant Impact," while private companies rated none of the top five at that level.

Public companies were the only organizations to identify a macroeconomic risk (economic conditions may restrict growth) as one of the top five risks; in addition, public companies had two operational risks and two strategic risks in the top five. All five of the top risks identified by not-for-profit and governmental organizations are operational risks. Private for-profit companies recognized three operational risks and two strategic risks.

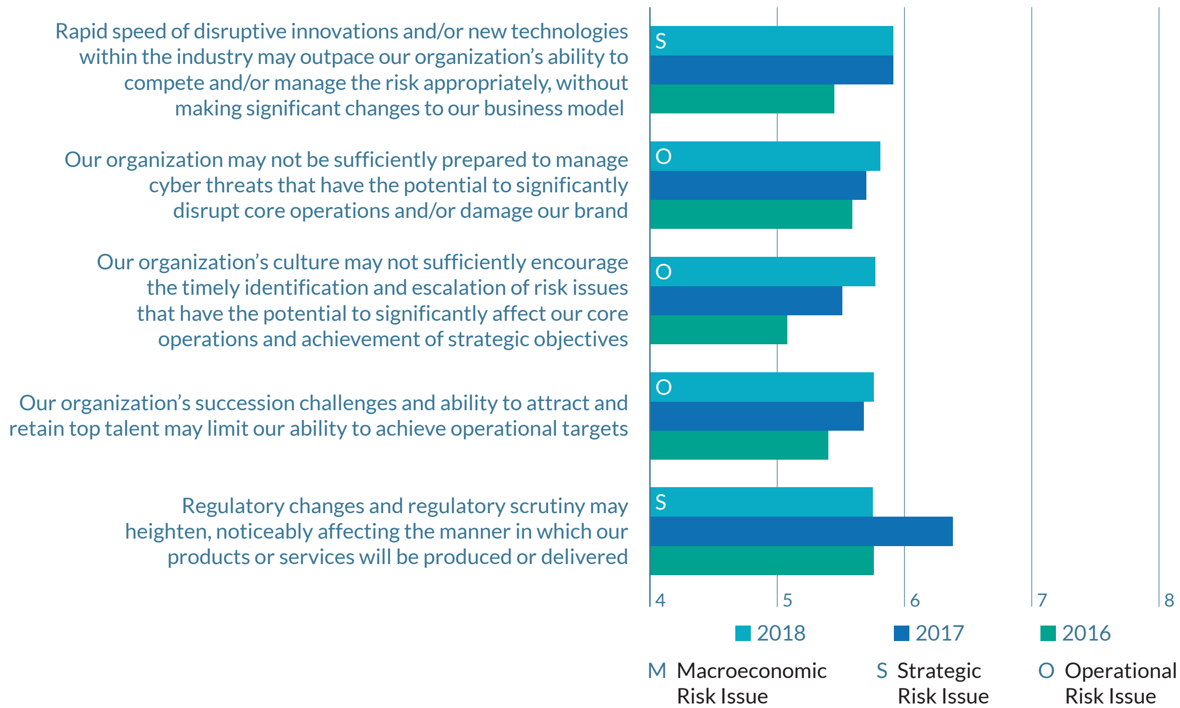
All of the organizations are concerned about cyber threats, with that risk in the top five risks for each of the organization types. Both public companies and not-for-profit and governmental organizations also rated the threat related to an inability to make changes to the business model or core operations due to resistance to change as one of their top risk concerns for 2018. Given the reliance on technology and the internet to conduct business for almost all enterprises and the reputational costs that can be incurred due to failure, concerns about cyber risks and the future resources needed to upgrade information systems cannot be ignored.

Both public and private for-profit companies are concerned about the impact of how the rapid speed of disruptive innovations or new technologies might affect their ability to grow their businesses, each rating it as their top risk. Importantly, the risk changed to a "Significant Impact" threat from a "Potential Impact" for public companies. Additionally, each rated the strategic threat of regulatory change as a top five risk, although at a much lower level than in 2017. Both private for-profit and not-for-profit and governmental organizations rated risks related to not having a culture to identify risks in a timely manner and succession and talent challenges as top five risk concerns.

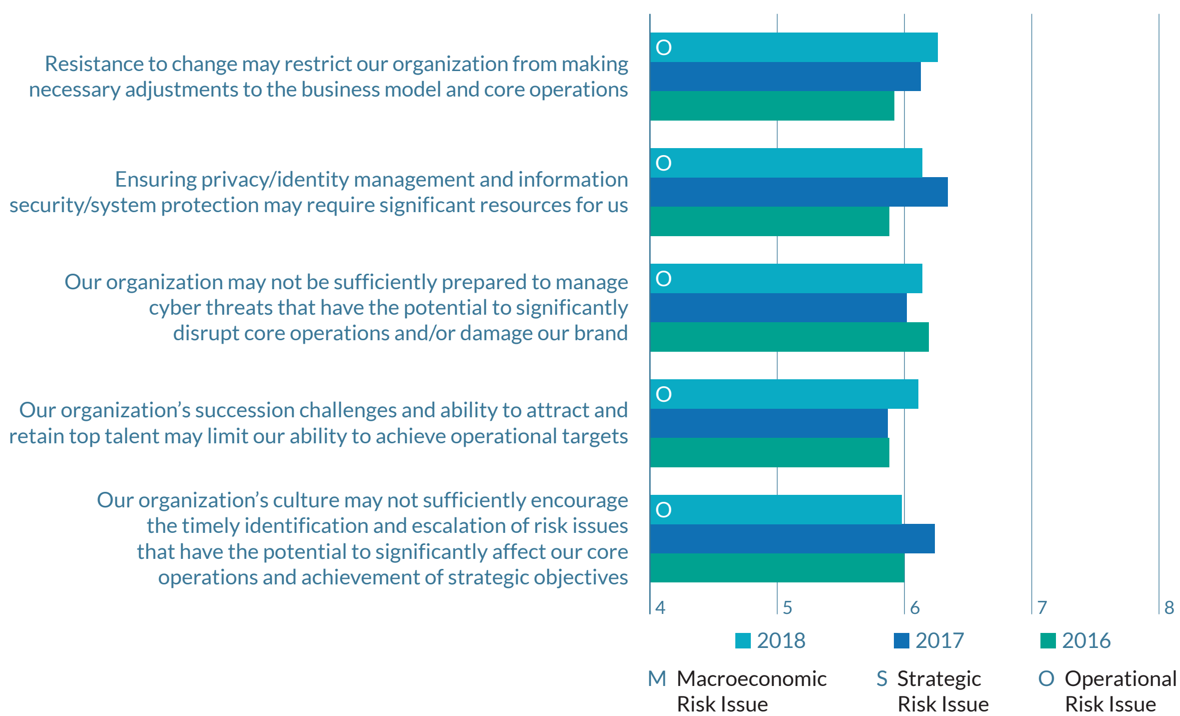
Public Companies



Privately Held For-Profit Companies



Not-for-Profit and Governmental Organizations



Analysis of Differences Between Geographic Regions

For this year's report, we obtained a sufficient number of non-U.S.-based organizations to split the sample into five distinct groups: 333 North America-based organizations (NA), 133 organizations from the Asia-Pacific (AP) region, 198 organizations based in Europe or the United Kingdom (EUR), 18 organizations based in Africa (AFR), and 46 organizations from elsewhere (42 did not disclose a location). We do not provide separate results for these 46 organizations.[11]

We analyzed responses across the four groups to determine whether respondents across different geographic locations rank-order risks differently. Similar to our analysis summarized earlier in this report, we analyzed responses about overall impressions of the magnitude and severity of risks across the three categories. Again, the scores in the table below reflect responses to the question about their overall impression of the magnitude and severity of risks their organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months, using a 10-point scale where 1 = "Extremely Low" and 10 = "Extensive."

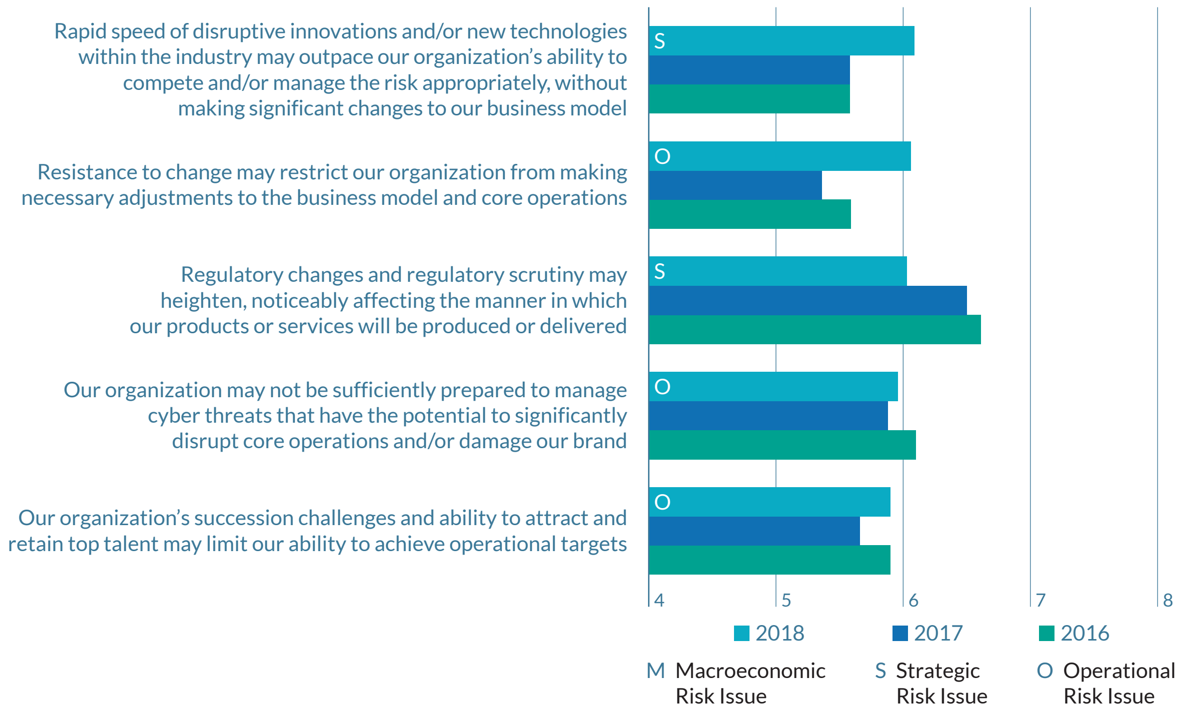
Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	2018	2017	2016
North America-based Organizations	5.7	6.0	6.0
Asia-Pacific-based Organizations	6.1	6.5	6.3
Europe-based Organizations	6.4	6.7	6.4
Africa-based Organizations	5.3	N/A	N/A

Globally, organizations from each of the four geographical regions agree that the overall magnitude and severity of risks facing the organization have cooled from 2017.

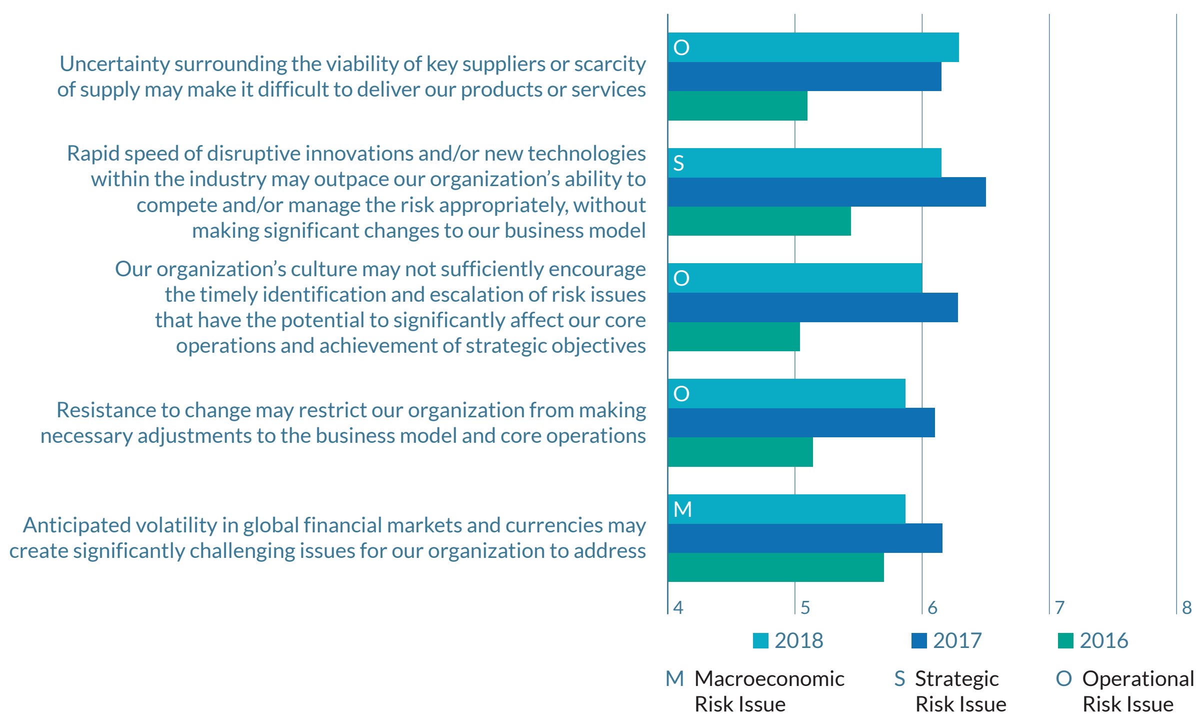
Across the four regions the similarities and differences are very interesting. Three regions have one operational risk and one strategic risk in common. The strategic threat from the rapid speed of disruptive innovations and the operational threat from resistance to change stand out for all regions except Africa. The concern from being able to quickly adapt to disruptions and change course appears to be at the forefront for all executives. The top five risks for European-based and African-based organizations are dominated by macroeconomic risks, with three (for EUR) and two (for AFR) of their top five risks from that category. Not surprisingly, concerns over low interest rates, economic conditions and volatility in financial markets are Europe-based organizations' top three risks, while in Africa concerns about political stability and economic conditions are primary. However, the decrease in the concern over economic conditions from 7.3 to 6.2 suggests that business conditions are improving for European-based organizations. North American respondents identified cyber threats and succession challenges and the ability to attract top talent as top five risks. African respondents included succession challenges and talent retention in their top five. Respondents from the Asia-Pacific region were the only group to identify the risk of uncertainty surrounding key suppliers as a top five risk, likely because supply chains in many Asian companies are based on a low-cost model that does not support present day growth imperatives.

[11] The 333 North American organizations are composed of 327 U.S.-based organizations and six organizations based in Canada.

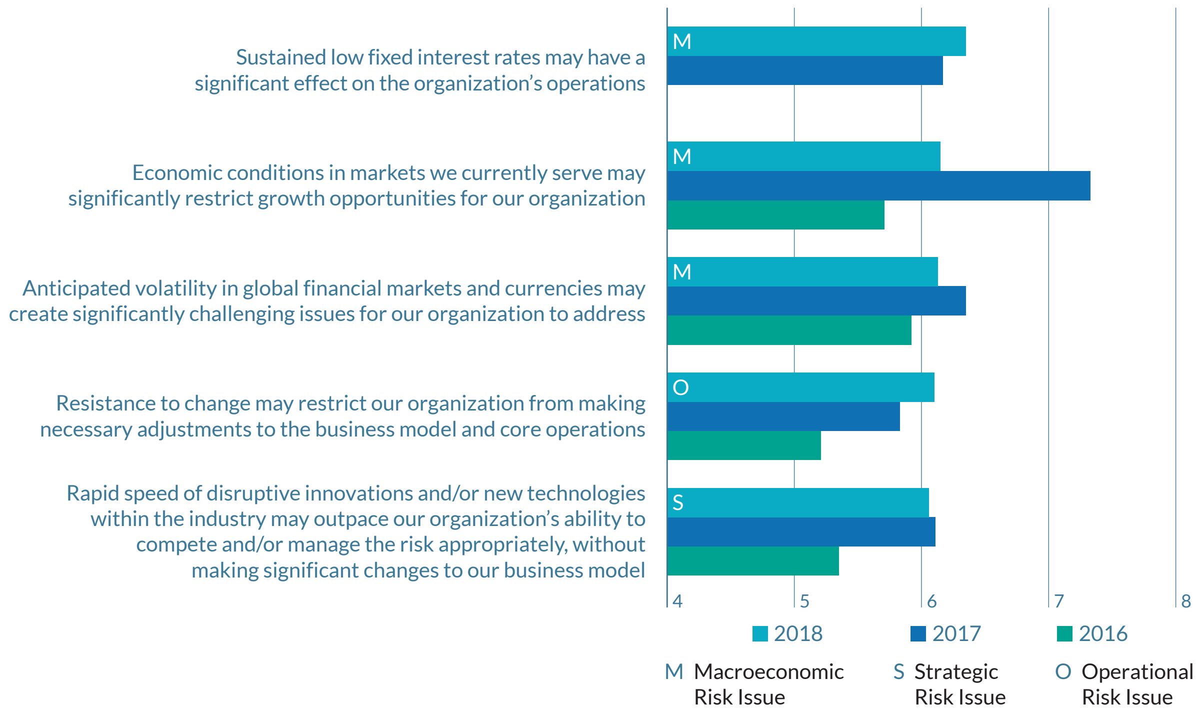
North American HQ Organizations



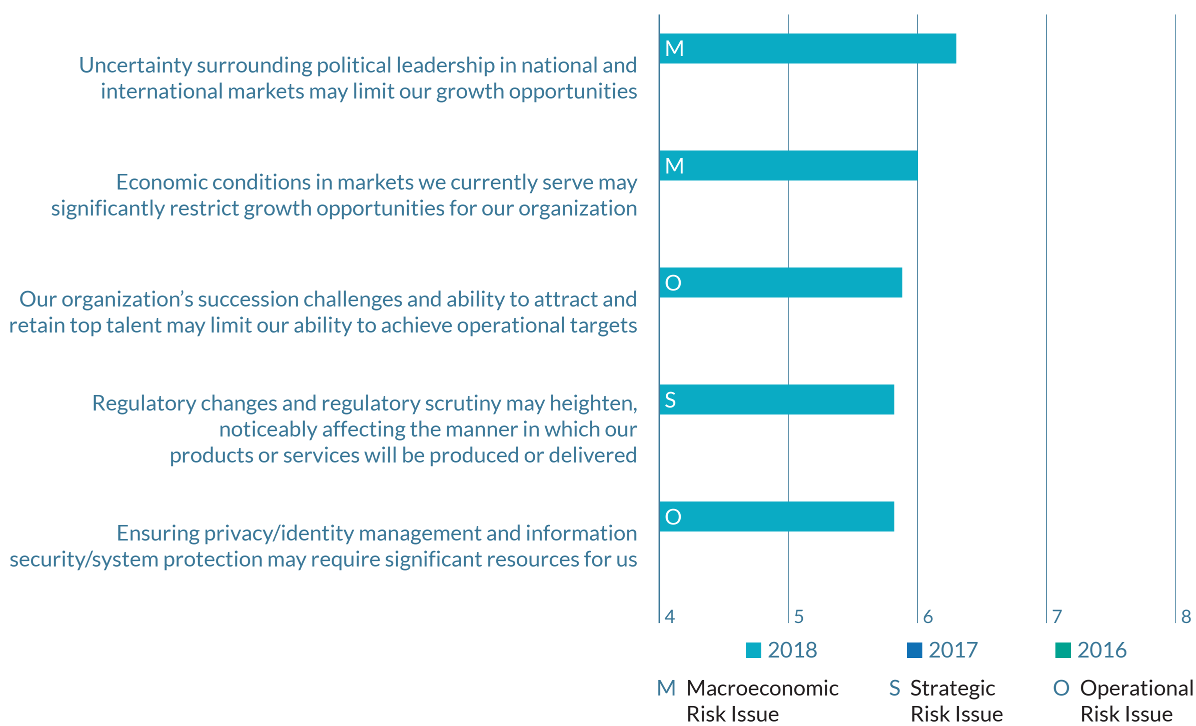
Asia-Pacific HQ Organizations



European HQ Organizations



African HQ Organizations



A Closer Look at Brexit

Perhaps due, at least in part, to Brexit, respondents from the United Kingdom see a substantially risker business environment for 2018 relative to other respondents. What may be most telling is that UK respondents rank 17 of the 30 risk issues in the survey at the "Significant Impact" level (6.0 or higher), versus just one risk issue at this level for all other respondents. Also, macroeconomic risks dominate the top risk issues for UK-based organizations (five of the top 10), versus just one macroeconomic risk in the top 10 for all other organizations.

Since the Brexit referendum in June 2016, there has been continuing uncertainty surrounding what the future relationship between the United Kingdom and the European Union will look like and what it will mean for business across many industries — agriculture, tourism, fishing, pharmaceuticals and life sciences, manufacturing, financial services, and aviation, to name but a few.

As of the release of this report, negotiations between the UK and the European Commission (acting on behalf of the European Council) are focused on the exit settlement, the land border with the Republic of Ireland (and the continued working of the Good Friday Agreement), and the rights of EU workers in the UK. The outcome of these negotiations is far from certain, with no settlement a possible scenario. It also is possible that the UK and the European Commission could agree to extend negotiations and for an implementation phase or transitional arrangements to be put in place while a final agreement is reached. How long the implementation phase or transitional arrangements would be has yet to be established.

As Brexit slowly progresses, there are a number of key areas organizations must consider in developing their strategy to deal with this major transition. These areas can affect business model design, governance and sustainability. They include:

- Effect on customers
- Impact on supply chain and outsource providers
- Implications on the talent base supporting UK operations
- Financial risks (cost of borrowing and volatility of money markets, stress testing, foreign exchange exposures)
- Technology and data
- Certainty and continuity of legal agreements (material adverse change)

Other factors organizations should consider include a comprehensive communication plan (employees, customers, suppliers, investors, regulators and other stakeholders), effective lobbying and positioning, and leveraging opportunities.

With supply chains across national and international borders being so complex and considering the significant mobility of many in the labor market, including those with specialized, in-demand skills (for example, technology, fintech, food production), even organizations with no obvious cross-border EU strategies are affected by Brexit.

Analysis of Differences Between Organizations With and Without Rated Debt

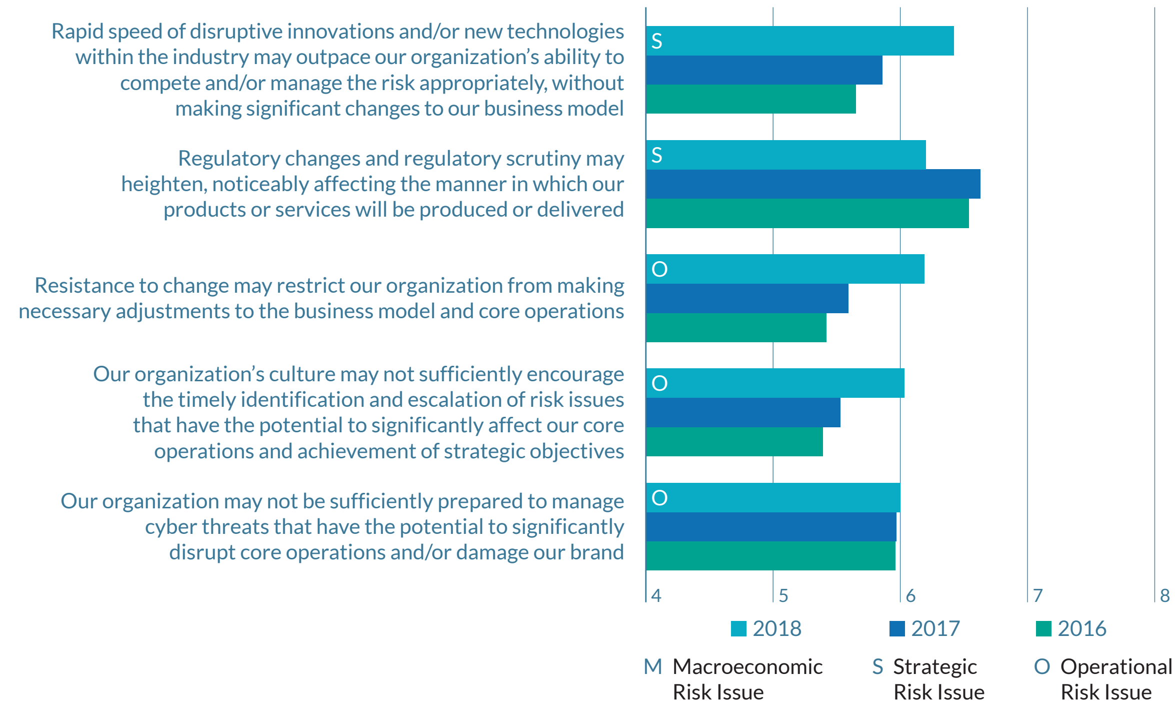
We also asked participants to indicate whether their organizations have rated debt outstanding, whereby the major credit rating agencies may evaluate the overall riskiness of the enterprise and, implicitly, the organization's risk oversight processes as part of the entity's overall credit score. We are particularly interested in observing how organizations with rated debt perceive their overall risk environment in light of the explicit focus of rating agencies on the management and governance processes, including enterprisewide risk management.

Two hundred fifty-six participants in the survey represent organizations with rated debt outstanding, while 433 respondents represent organizations without rated debt. Thirty-nine respondents indicated "I'm not sure" in response to this question in 2018. The 256 organizations in our study with rated debt outstanding include 134 public companies, 81 private companies, and 41 governmental or not-for-profit organizations. For the 433 organizations without rated debt, 135 are public companies, 216 are private, and 82 are governmental or not-for-profit organizations. We report the survey results for 2018 and the two prior years for rated debt outstanding organizations and those without rated debt in the bar charts on the following page.

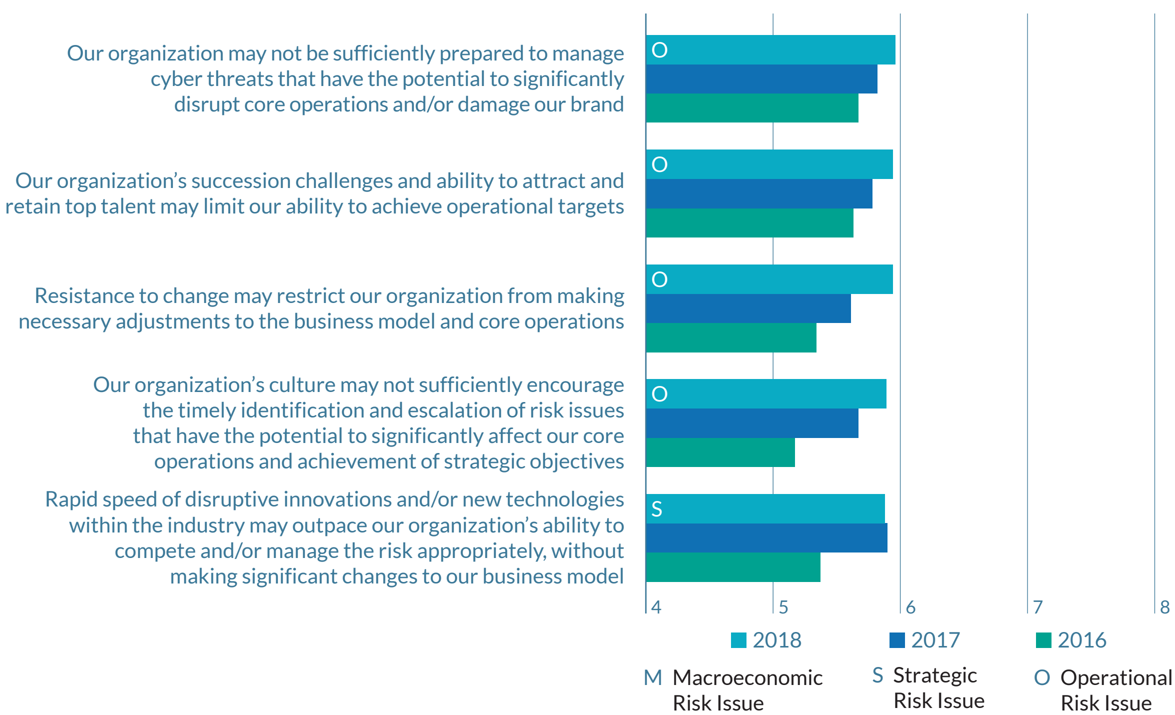
Four of the top five risks are the same for both types of organizations, but the ordering of the top five is different for the number one risk and the number five risk. Organizations with rated debt are most concerned about the risk of rapid speed of disruptive innovation, whereas that risk was ranked fifth for organizations with non-rated debt. In contrast, organizations without rated debt are most concerned about their ability to manage a cyber threat, whereas that was ranked fifth by organizations with rated debt. Also, concerns about regulatory changes and regulatory scrutiny is a top five risk for organizations with rated debt, whereas that concern did not make the top five list of risks for organizations without rated debt. Organizations without rated debt indicate concerns about the ability to manage succession challenges and to recruit and retain talent, whereas that did not make the top five list of risks for organizations with rated debt.

They also shared the remaining three top five risks — though they, too, were in slightly different order across the two groups. Overall, there is no marked difference between these two groups with respect to 2018 risk concerns. Both types of organizations note concerns about the resistance to change and concerns about the organization's culture not encouraging the timely identification and escalation of risk issues.

Organizations with Rated Debt



Organizations without Rated Debt



Plans to Deploy Resources to Enhance Risk Management Capabilities

In light of the risk environment, we asked executives to provide insights about whether the organization plans to devote additional resources to improve risk management over the next 12 months. We used a 10-point scale whereby 1 signifies "Unlikely to Make Changes" and 10 signifies "Extremely Likely to Make Changes."

Despite the fact that respondents noted a slight reduction in their impression about the magnitude and severity of overall risks for 2018 relative to the prior year, they do indicate a slightly higher likelihood of deploying more resources to risk management in 2018 relative to 2017. This may be due to an overall realization that the world continues to grow in complexity and that there continues to be a need to invest in more robust risk management capabilities. In fact, respondents in all industry groups, except for the Energy and Utility industry group, indicate that they plan to maintain existing levels of investment or increase their level of investments in risk management over the next 12 months.

	2018	2017	2016
How likely is it that your organization will devote additional time and/or resources to risk identification and management over the next 12 months?	6.1	6.0	6.1

In addition to having respondents rate the impact of 30 specific risks, we also asked about their overall impression of the perceived magnitude and severity of risks to be faced and the likelihood of investing additional resources in risk management efforts. The respondents' overall response suggest a slight decrease in the nature of the overall risk environment, with an average score of 6.0 in 2018 relative to 6.2 in 2017.

	2018	2017	2016
Overall, what is your impression of the magnitude and severity of risks your organization will be facing with respect to reaching or exceeding profitability (or funding) targets over the next 12 months?	6.0	6.2	6.1

The Technology, Media and Communications and the Healthcare and Life Sciences industry groups both show the greatest increase in likelihood to invest more in risk management capabilities in 2018 relative to 2017. That finding is not surprising given that these two industry groups have the greatest number of risks rated at the "Significant Impact" level (i.e., an average risk rating of 6.0 or higher on our 10-point scale).

The Financial Services industry group expressed the greatest likelihood to devote additional time and resources toward risk management in 2018, followed by the Manufacturing and Distribution and Technology, Media and Communications industry groups.

Likelihood that the organization plans to devote additional resources to risk management over the next 12 months																				
Full Sample			Financial Services			Consumer Products and Services			Manufacturing and Distribution			Technology, Media and Communications			Healthcare and Life Sciences			Energy and Utilities		
2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
6.1	6.0	6.1	6.4	6.3	6.4	6.0	5.8	6.2	6.3	6.3	6.0	6.3	5.9	5.8	5.9	5.5	6.2	5.2	5.9	5.5

We also analyzed responses to this question across different sizes of organizations — the smallest organizations (those with revenues less than $100 million) exhibited the greatest increase in the likelihood that they plan to deploy additional resources to risk management. Perhaps smaller organizations may now be realizing that the overall risk environment is growing in complexity and that they, too, need to be in a position to more effectively navigate that reality. The largest organizations expressed the highest level of likelihood that they will be investing in more robust risk identification and management over the next 12 months.

Likelihood that the organization plans to devote additional resources to risk management over the next 12 months														
Full Sample			Revenues Less than $100M			Revenues $100M - $999M			Revenues $1B – $9.9B			Revenues $10B or Higher		
2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
6.1	6.0	6.1	6.0	4.9	5.7	6.2	5.9	6.0	6.0	6.4	6.3	6.4	6.1	6.3

While privately held for-profit enterprises indicate a slight decrease in likelihood that they will be devoting additional resources to risk management over the next 12 months, they also scored the highest among all types of entities in the likelihood that they plan to invest more in risk management for 2018. Public companies and not-for-profit and government entities all signal plans to invest time and resources in building out their risk management infrastructure in 2018. The level of interest in improving risk management capabilities across all types of organizations signals a realization that risks affect all types of entities and that no one organization is immune to that fact. Therefore, no entity can afford ignoring the importance of risk management thinking.

Likelihood that the organization plans to devote additional resources to risk management over the next 12 months											
Full Sample			Publicly Traded Companies			Privately Held For-Profit Enterprises			Not-for-Profit and Governmental Organizations		
2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
6.1	6.0	6.1	6.2	5.9	6.1	6.3	6.4	6.3	5.8	5.5	6.0

Interestingly, there are noticeable differences in viewpoints between respondents who serve on boards and C-suite executives. Board member respondents signaled the highest propensity for the organizations they represent to invest more in risk identification and management in 2018, with their overall score increasing from 5.3 in 2017 to 6.3 in 2018. In contrast, most C-suite executives indicate that the level of investment will be relatively similar to the investment in 2017. For some reason, board members seem to indicate the greatest concern that existing risk management capabilities may not be sufficient. Perhaps the concern is due to a lack of information about the sufficiency and effectiveness of already existing risk management practices. Or perhaps it is due to the directors' perception of a higher risk profile. Whatever the reason, there appears to be a possible disconnect between directors and C-level executives. Therefore, management may want to consider how it can communicate more information about what the organization is doing to manage enterprisewide risks. For some organizations, the board's concern may be valid given the overall lack of risk management robustness throughout the enterprise. Discussion between boards and management about the entity's key risks and the capabilities in place to manage those risks may be the first step necessary to determine whether more needs to be done.

Likelihood that the organization plans to devote additional resources to risk management over the next 12 months																							
Full Sample			Board Members			CEOs			CFOs			CROs			CAEs			CIO/CTOs			Other C-Suite		
2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
6.1	6.0	6.1	6.3	5.3	6.4	5.9	5.9	6.2	6.3	6.4	6.3	5.8	6.0	6.0	6.2	5.5	5.9	6.5	6.7	6.3	6.4	6.4	6.3

African-, Asia-Pacific- and Europe-based organizations all indicate a greater likelihood that they are likely to invest in risk management in 2018 relative to North America-based organizations, but their level of increased activities is not as strong as in prior years (recall that this is the first year we have included a separate category for African-based organizations). This reduction in 2018 is somewhat surprising for organizations in the European region, given they had the highest number of "Significant Impact" risks for 2018.

Likelihood that the organization plans to devote additional resources to risk management over the next 12 months														
Full Sample			North America			Asia-Pacific			Europe			Africa		
2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016
6.1	6.0	6.1	5.9	5.7	6.0	6.4	6.6	6.1	6.4	6.7	6.3	6.5	N/A	N/A

A Call to Action: Questions to Consider

This report provides insights from 728 board members and executives about risks that are likely to affect their organizations over the next 12 months. Overall, most rate the business environment as significantly risky, and on an overall basis, respondents rated 20 of the 30 risks included in prior year surveys as higher in 2018 relative to 2017, suggesting that there continues to be a number of uncertainties in the marketplace for 2018.

The message is that the rapid pace of change in the global marketplace provides a risky environment for entities of all types in which to operate. The unique aspect regarding disruptive change is that it represents a choice — which side of the change curve do organizations want to be on? For example, organizations need to make a conscious decision about whether they are going to be the disruptor and try to lead as a transformer of the industry or, alternatively, play a waiting game, monitor the competitive landscape and react only when necessary to defend market share. This is an important question because, with the speed of change and constant advances in technology, rapid response to new market opportunities and emerging risks can be a major source of competitive advantage. Conversely, failure to remain abreast or ahead of the change curve can place an organization in a position of becoming captive to events rather than charting its own course. For those organizations choosing not to actively disrupt the status quo, their challenge is to be agile enough to react quickly as an early mover. Not enough are.

Accordingly, in the interest of evaluating and improving the risk assessment process in light of the findings in this report, we offer executives and directors the following diagnostic questions to consider when evaluating their organization's risk assessment process:

- Given the pace of change experienced in the industry and the relative riskiness and nature of the organization's operations:
  - Is the risk assessment process frequent enough? Does it involve the appropriate organizational stakeholders?
  - Is the business environment monitored over time for evidence of changes that may invalidate one or more critical assumptions underlying the organization's strategy?
  - Are risks evaluated in the context of the organization's strategy and operations? Is adequate consideration given to macroeconomic issues?
  - Is the process supported by an effective methodology and relevant risk criteria? Does the process consider a sufficient time horizon to pick up strategic risks, e.g., the longer the horizon, the more likely new issues will present themselves? Does the process consider extreme as well as plausible scenarios?
  - Does the process encourage an open, positive dialogue for identifying and evaluating opportunities and risks? Is attention given to reducing the risk of undue bias and groupthink? Does it give adequate attention to differences in viewpoints that may exist across different executives and different global jurisdictions?
  - Does the process delineate the critical enterprise risks from the day-to-day risks of managing the business so as to focus the dialogue in the C-suite and boardroom?
  - Is the board informed of the results on a timely basis? Do directors agree with management's determination of the significant risks?
- Following completion of a formal or informal risk assessment:
  - Are risk owners identified for newly identified risks?

- Is there an effort to source the root causes of certain risks that warrant a better understanding? Does the process look for patterns that connect potential interrelated risk events?
- Are effective risk response action plans developed to address the risk at the source? Are the risk owners accountable for their design and execution?
- When there is evidence that one or more critical assumptions underlying the strategy are becoming, or have become, invalid, does management act timely on that knowledge to revisit the strategy and undertake mid-course adjustments?
- Is implementation of risk responses monitored by the risk owners?
- Do decision-making processes consider the impact on the organization's risk profile?

- With respect to the most critical risks facing the organization, do directors understand the organization's responses to these risks? Is there an enterprisewide process in place that directors can point to that answers these questions and is that process informing the board's risk oversight effectively?
- Is management periodically evaluating changes in the business environment to identify the risks inherent in the organization's strategy? Is the board sufficiently involved in this process, particularly when such changes involve acquisition of new businesses, entry into new markets, the introduction of innovative technologies or alteration of key assumptions underlying the strategy?
- Are significant risk issues warranting attention by executive management and the board escalated to their attention on a timely basis? Does management apprise the board in a timely manner of significant risks or significant changes in the organization's risk profile? Is there a process for identifying emerging risks? Does it result in consideration of response plans on a timely basis?
- Is there a periodic board-level dialogue regarding management's appetite for risk and whether the organization's risk profile is consistent with that risk appetite? Is the board satisfied that the strategy-setting process appropriately considers a substantive assessment of the risks the enterprise is taking on as strategic alternatives are considered and the selected strategy is executed?
- Is adequate attention given to red flags indicating signs of a dysfunctional culture that suppresses escalation of important risk information or encourages unacceptable risk taking? Are warning signs posted by the risk management function or internal audit addressed timely?

These and other questions can assist organizations in defining their specific risks and assessing the adequacy of the processes informing risk management and board risk oversight. We hope this report provides important insights about perceived risks on the horizon for 2018 and serves as a catalyst for an updated assessment of risks and risk management capabilities within all organizations, as well as improvement in the assessment processes in place.

Research Team

This research project was conducted in partnership between Protiviti and North Carolina State University's Enterprise Risk Management Initiative. Individuals participating in this project include:

North Carolina State University's ERM Initiative

- Mark Beasley
- Bruce Branson
- Don Pagach

Protiviti

- Pat Scott
- Brian Christensen
- Jim DeLoach
- Matthew Moore
- Dolores Atallo
- Kevin Donahue

ABOUT PROTIVITI

Protiviti is a global consulting firm that delivers deep expertise, objective insights, a tailored approach and unparalleled collaboration to help leaders confidently face the future. Protiviti and our independently owned Member Firms provide consulting solutions in finance, technology, operations, data, analytics, governance, risk and internal audit to our clients through our network of more than 70 offices in over 20 countries.

We have served more than 60 percent of *Fortune* 1000® and 35 percent of *Fortune* Global 500® companies. We also work with smaller, growing companies, including those looking to go public, as well as with government agencies. Protiviti is a wholly owned subsidiary of Robert Half (NYSE: RHI). Founded in 1948, Robert Half is a member of the S&P 500 index.

ABOUT NORTH CAROLINA STATE UNIVERSITY'S ERM INITIATIVE

The Enterprise Risk Management (ERM) Initiative in the Poole College of Management at North Carolina State University provides thought leadership about ERM practices and their integration with strategy and corporate governance. Faculty in the ERM Initiative frequently work with boards of directors and senior management teams helping them link ERM to strategy and governance, host executive workshops and educational training sessions, and issue research and thought papers on practical approaches to implementing more effective risk oversight techniques (**www.erm.ncsu.edu**).

NC STATE Poole College of Management
Enterprise Risk Management Initiative

www.erm.ncsu.edu

protiviti®

www.protiviti.com