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Global Business Consulting

NC STATE Poole College of Management
Enterprise Risk Management Initiative

EXECUTIVE PERSPECTIVES ON TOP RISKS

2023 & 2032

Key issues being discussed in the boardroom and C-suite | **Executive Summary**

Research conducted by NC State University's ERM Initiative and Protiviti

Key highlights from this study

Major themes for 2023 and 2032

- **Uncertainty abounds, triggering heightened risk concerns for executives and boards**. Survey respondents rate the overall severity and magnitude of risks at the highest level we have observed in the 11 years this study has been conducted.

- **The risk landscape is changing but resistance to change persists.** Leaders cannot afford to ignore the changing risk landscape, given new risks can emerge rapidly. The culture of their organizations should be prepared to adapt to disruptive change and facilitate escalation of market opportunities and risks to decision makers.

- **The economy is top of mind.** There are significant concerns globally about the potential for persistent challenges related to inflation and growth.

- **Talent and technology concerns dominate the composition of top risks.** The 10-year outlook reflects a mix of opportunities and risks relating to disruptive innovation, advancing technologies and human capital challenges. Executives and boards recognize the need to find the talent to realize fully the value proposition associated with new technologies and digital innovations and are prioritizing strategies around reskilling and upskilling existing employees to get it. They also are concerned about increases in labor costs impacting achievement of profitability goals, as well as evolving approaches to managing hybrid and remote work environments and continued shifts in the nature of work.

- **There are diverse risk perspectives across the C-suite and boardroom.** There is noticeable variation among different leaders about what risks are most critical, highlighting the importance of engaging in conversations about the most significant risks for their organizations.

- **A long-term view of risks is vital in navigating the near term.** As organizations manage the challenges 2023 brings, they should also prepare for the long term by addressing issues noted in this survey, including effectively transforming legacy IT infrastructures, emphasizing the customer experience, investing in future growth opportunities, ensuring privacy and security, and advancing capabilities to deploy advanced data analytics. A long-term outlook helps companies focus on where to invest to be more resilient for the unexpected and better prepared for the next phase of growth.

The results show that risk management, as a discipline, is becoming more critical for success, with executives and boards expressing an overall higher likelihood to invest in strengthening risk management in 2023.

The top 10 risks for both 2023 and a decade later (2032) are highlighted in the charts that follow. As indicated by the red arrows, each of the top 10 risks for 2023 is rated higher than it was for 2022, and each of the 2032 risks is higher than last year's survey that looked out to 2031.

Top risks for 2023

1. Organization's succession challenges and ability to attract and retain top talent in a tightening talent market may limit ability to achieve operational targets
2. Economic conditions in markets we currently serve may significantly restrict growth opportunities
3. Anticipated increases in labor costs may affect ability to meet profitability targets
4. Resistance to change may restrict the organization from making necessary adjustments to the business model and core operations
5. Uncertainty surrounding core supply chain ecosystem
6. Changes in the overall work environment may lead to challenges in sustaining culture and the conduct of the business
7. Adoption of digital technologies may require new skills in short supply, requiring significant efforts to reskill/upskill employees
8. Organization's culture may not sufficiently encourage the timely identification and escalation of risk issues
9. Approach to managing demands on or expectations of a significant portion of workforce to work remotely or as part of a hybrid work environment
10. Organization may not be sufficiently resilient and/or agile to manage an unexpected crisis

Top risks for 2032

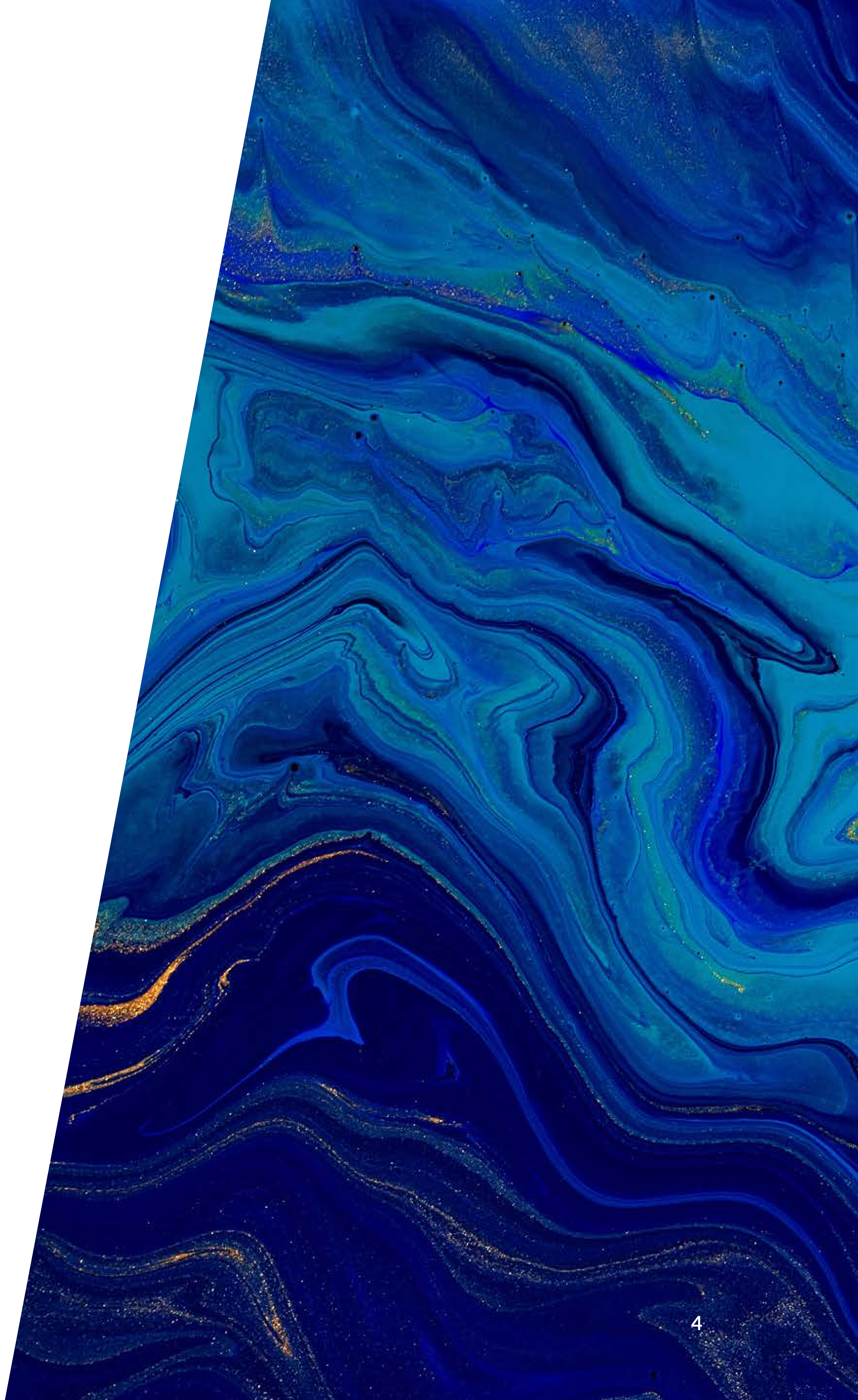
1. Organization's succession challenges and ability to attract and retain top talent in a tightening talent market may limit ability to achieve operational targets
2. Adoption of digital technologies may require new skills in short supply, requiring significant efforts to reskill/upskill employees
3. Rapid speed of disruptive innovations enabled by new and emerging technologies and/or other market forces may outpace ability to compete
4. Resistance to change may restrict the organization from making necessary adjustments to the business model and core operations
5. Ensuring privacy and compliance with growing identity protection expectations may require significant resources
6. Existing operations and legacy IT infrastructure may not be able to meet performance expectations as well as "born digital" competitors
7. Inability to utilize data analytics and "big data" to achieve market intelligence and increase productivity and efficiency
8. Economic conditions in markets we currently serve may significantly restrict growth opportunities
9. Regulatory changes and regulatory scrutiny may heighten, noticeably affecting how products or services will be produced or delivered
10. Anticipated increases in labor costs may affect ability to meet profitability targets

Introduction

The level of uncertainty in today's global marketplace and the velocity of change continue to produce a multitude of potential risks that can disrupt an organization's business model and strategy on very short notice. Unfolding events in Eastern Europe, changes in government leadership in several countries around the globe, escalating inflation, rising interest rates, ever-present cyber threats, competition for talent and specialized skill sets, continued disruptions in global supply chains, rapidly developing technologies … these represent just a sampling of the complex web of drivers of risks that may threaten an organization's achievement of its objectives. Uncertainty and risk are here to stay. Keeping abreast of emerging risk issues and market opportunities is critical to improving organizational resilience.

The need for robust, strategic approaches to anticipating and managing risks cannot be over-emphasized. Boards of directors and executive management teams who choose to manage risks on a reactive basis are likely to be left behind those who embrace the reality that risk and return are interconnected and recognize the benefits of proactively managing risks through a strategic lens. Those leaders who understand how insights about emerging risks can be used to navigate the world of uncertainty nimbly increase their organization's ability to pivot when the unexpected occurs. That can translate into sustainable competitive advantage.

To help executives and boards better identify potential risks on the horizon, Protiviti and NC State University's ERM Initiative are pleased to provide this report focusing on the top risks currently on the minds of boards of directors and senior executives around the globe. This report contains results from our 11th annual worldwide risk survey of directors and executives to obtain their views on the extent to which a broad collection of risks is likely to affect their organizations over the next year — 2023. In addition to insights about near-term risks in 2023, we also asked respondents to consider how these risks will affect their organizations a decade from now (in 2032).



Our respondent group of 1,304 executives, comprised primarily of board members and C-suite executives from all major regions of the world, provided their perspectives about the potential impact in 2023, and also in 2032, of 38 specific risks across 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

This executive summary provides a brief description of our methodology and an overview of the overall risk concerns for 2023 and 2032, followed by a series of calls to action and a review of the results by type of executive position. It concludes with diagnostic questions executives and directors may find helpful to consider when evaluating risk assessment and risk management processes.

Our full report (available at erm.ncsu.edu or protiviti.com/toprisks) contains extensive analysis of key insights about top risk concerns across a number of different dimensions, including a breakdown by industry, size of company, type of ownership structure, and geographic locations of company headquarters.

"We appreciate the support our annual survey continues to receive from board members and C-level executives around the world. This report is not possible without their participation. Most importantly, we appreciate the insights these leaders have given us to share with the market. I believe that the insights and recommendations in this report reflect the challenges and opportunities of our times and merit close attention in the boardroom and C-suite."

PAT SCOTT
EXECUTIVE VICE PRESIDENT, GLOBAL INDUSTRY, CLIENT PROGRAMS AND MARKETING, PROTIVITI

[1] Thirty-five of the 38 risks have been included in our survey in each of the three most recent years of our study: 2023, 2022, and 2021. One additional risk was added to last year's survey (2022) and two new risks were added to this year's survey (2023). See Table 1 for a list of the 38 risks addressed in this study.

About the survey

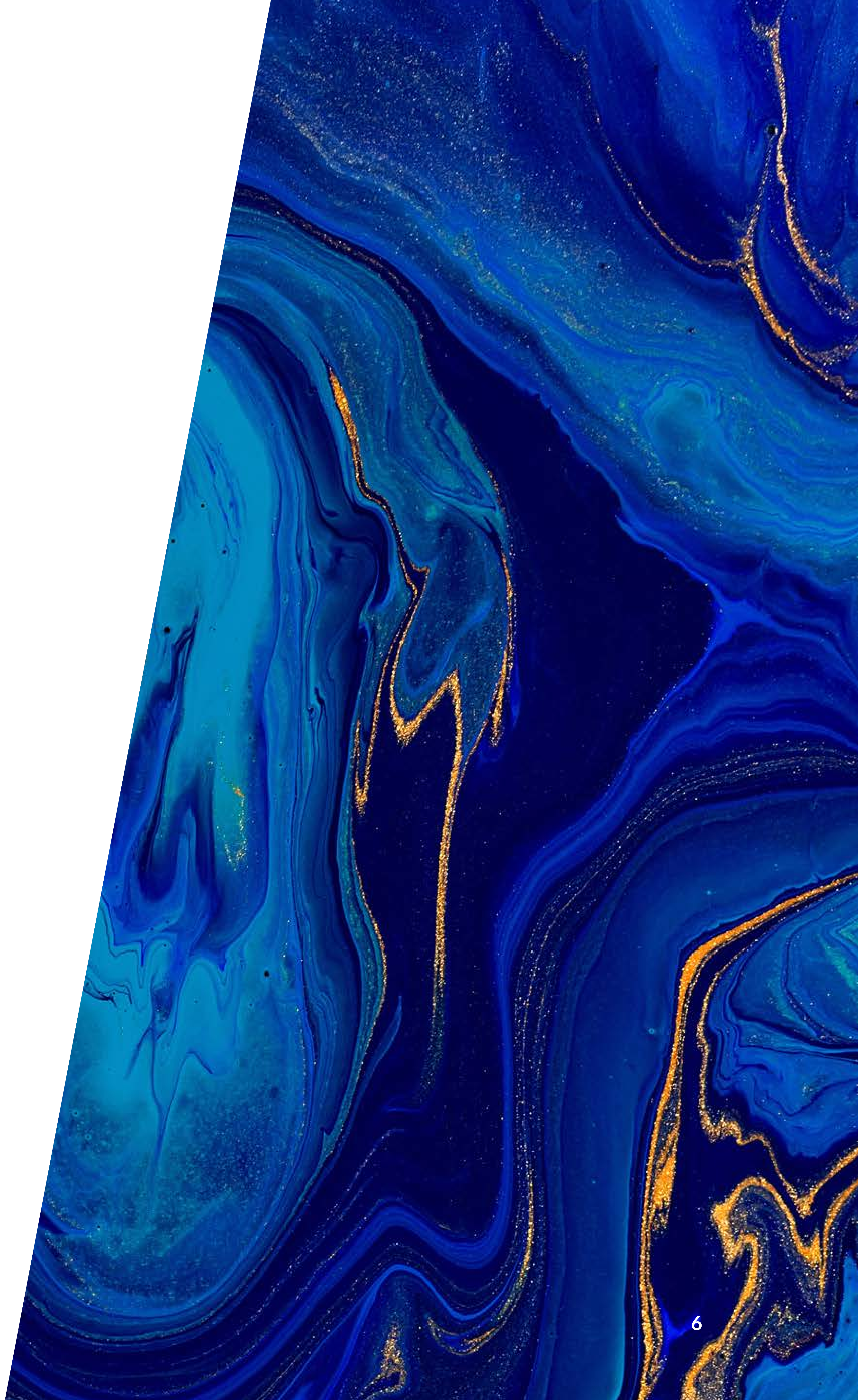
We are pleased with the global reach of our survey this year, with strong participation from 1,304 board members and executives across a variety of industries.

Our survey was conducted online in September and October of 2022 to capture perspectives on risks on the minds of executives as they peered into 2023. Each respondent was asked to rate 38 individual risk issues in terms of their relative impact 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. We also asked them to consider how each of these risks was likely to affect their organizations 10 years in the future (i.e., in 2032).

For each of the 38 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:

Classification	Risks with an average score of
Significant Impact	**6.0 or higher**
Potential Impact	**4.5 through 5.99**
Less Significant Impact	**4.49 or lower**



With regard to the respondents, we targeted our survey to individuals currently serving on the board of directors or in senior executive positions so that we could capture board and C-suite perspectives about risks on the horizon for 2023 and 2032. Respondents to the survey serve in a number of different board and executive positions.

Executive position	Number of respondents
Board Member (Board)	189
Chief Executive Officer (CEO)	138
Chief Financial Officer (CFO)	141
Chief Human Resources Officer (CHRO)	105
Chief Risk Officer (CRO)	97
Chief Audit Executive (CAE)	129
Chief Information/Technology Officer (CIO/CTO)	223
Chief Strategy/Innovation Officer (CSO)	76
Chief Data/Digital Officer (CDO)	72
Other C-Suite[2] (OCS)	36
All Other[3]	98
Total number of respondents	**1,304**

In our full report (available online at erm.ncsu.edu or protiviti.com/toprisks), we analyze variances across different sizes and types of organizations, industry and respondent position, in addition to variations among organizations based in different geographic regions. Page 35 provides more details about our methodology. This executive summary highlights our key findings.

[2] This category includes titles such as chief operating officer, general counsel and chief compliance officer.
[3] These 98 individuals either did not provide a response allowing for classification by position or would best be described as middle management or business advisers/consultants. We do not provide a separate analysis for this category.

Executive summary

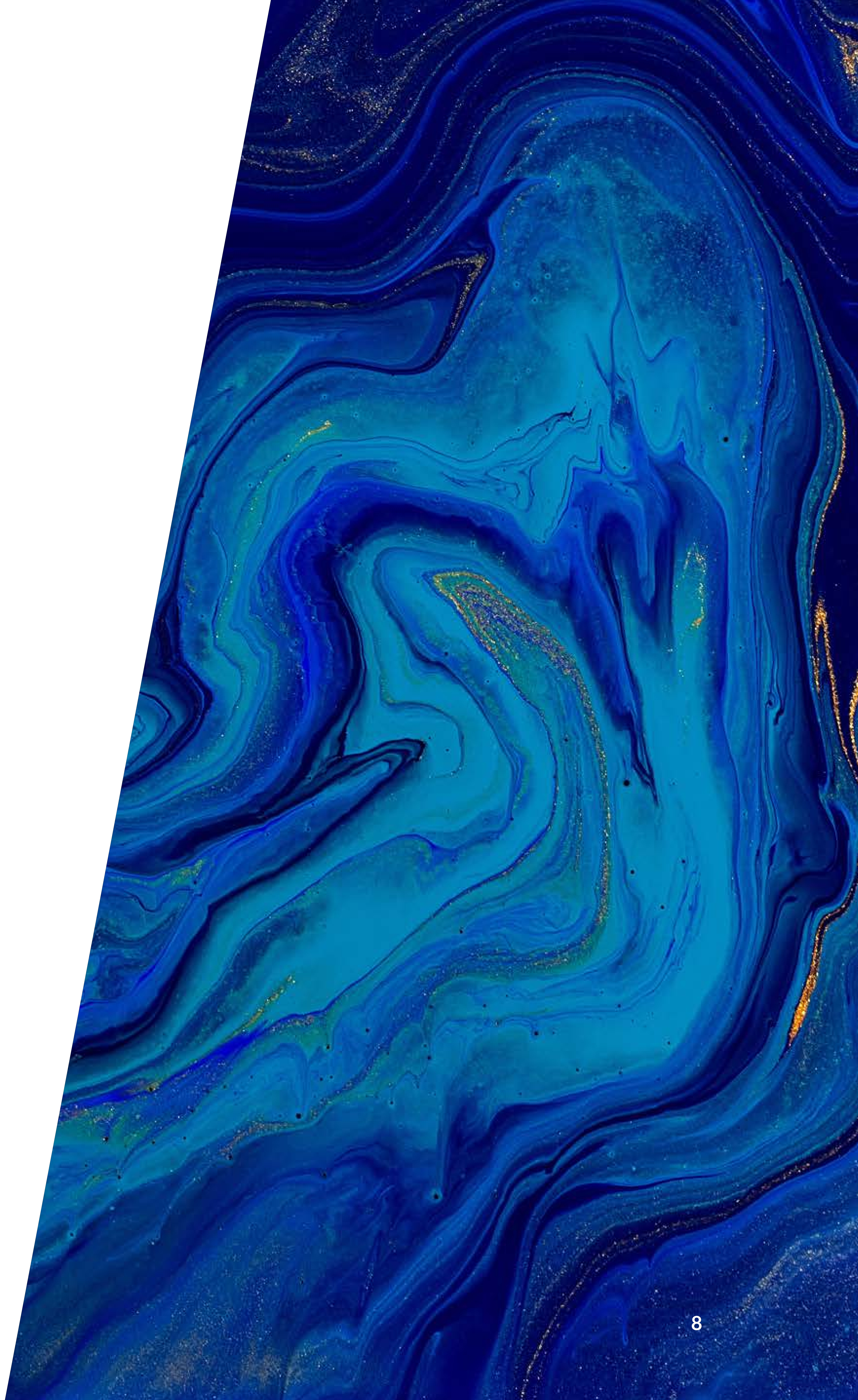
This year's survey reveals interesting perceptions of executives and directors regarding the current and long-term business environment. Key takeaways to consider include:

Global marketplace risks are the highest in more than a decade. Risks across the board have elevated this year in our survey. For 2023, all but three risks were ranked higher this year versus last year. For 2032, only a single risk was deemed to be a lower threat a decade from now, relative to concerns reported in last year's report.

Shifts in risks in the short-term versus long-term demand balancing near- and long-term priorities. There are noticeable differences in the top risks lists for 2023 and 2032. Merely focusing on near-term risks will inadequately prepare executives and boards for risks emerging a decade out, given that five of the top 10 risks in 2032 did not make the top 10 list for 2023. Waiting to recognize and plan for longer-horizon risks may put an organization in catch-up mode, if it's not too late already to react. Amid the opportunities and challenges is the need for leaders to examine closely their organization's readiness and resilience in the face of inevitable disruptive change and unwanted surprises. An ability to adjust and pivot could become the key differentiator between winners and losers.

The 10-year outlook presages disruptive times ahead. Risks on the horizon for 2032 indicate an overarching intersection of disruptive innovation, advancing technologies and talent challenges. Executives indicate concerns about emerging innovations and their organization's ability to attract, afford and retain the skills needed to embrace inevitable change — particularly changes to technology infrastructures to compete with "born digital" organizations and to leverage advanced data analytics to garner market insights needed to be competitive. These risks sustain the ongoing narrative that the 2020s is indeed a decade of disruption.

There is churn in the lists of top risks. In comparing this year's survey results to last year's findings, five of the top risks for 2022 and three of the top risks for 2031 fell out of the top 10 risks list for 2023 and 2032, respectively. Two risks related to the impact of the pandemic, concerns about the organization's ability to



shift to meet expectations related to diversity, equity and inclusion (DEI), the specter of cyber threats, and concerns about the inability to utilize data analytics effectively fell out of the top 10 for 2023. Those risks were replaced by overarching concerns related to supply chain challenges and the organization's resilience in a crisis, in addition to three risks related to the organization's overall work environment and culture, including timely escalation of risk issues to appropriate leaders. A similar churn is observed for 2032 relative to 2031. In comparing the top risks for 2031 and 2032, exposure to substitute products and services, ease of entrance of new competitors into the industry, and changes in the work environment impacting organizational culture and the business model were top 10 risks last year looking out 10 years but fell short of a top 10 ranking looking forward to 2032.

Resistance to change has become a formidable obstacle to success. Concerns with resistance to change represent the fourth-rated risk overall for both 2023 and 2032, compared to seventh and eighth for 2022 and 2031, respectively, in last year's survey. In the face of the disruption that lies ahead, survey participants are concerned about their organizations' agility to pivot in response to change — an incongruence that can lead to strategic failure. In this era of rapid change, this risk points to a need for trust, transparency and effective strategic communications.

People and culture are once again at the top of the agenda. Even amid an uncertain economy, inflationary conditions and fears of a possible recession over the next 12 months, people, talent and culture issues stand out as critical concerns for the board and C-suite. Talented people and culture are related, as the latter attracts the former and, effectively led, the best and brightest engender innovative cultures that can compete and win in the digital age. Several important people and culture sub-themes emerged:

- **Finding and keeping talent is THE top risk.** The number one risk overall for both 2023 and 2032 pertains to the ability to attract and retain top talent in a tightening labor market and succession challenges. Globally, this is the only risk issue at the "Significant Impact" level.
- **Future of work continues to be a defining business challenge.** The state of labor markets and the expected adoption of artificial intelligence (AI), automation in all its forms and other technologies are such that significant efforts will be necessary to upskill and reskill existing employees over the next decade. This is the seventh- and second-rated risk, respectively, for 2023 and 2032.
- **Rising labor costs are an elevated concern.** The risk of anticipated increases in labor costs affecting the organization's ability to meet profitability targets was the third-rated risk for 2023, up from sixth in 2022. With companies struggling to fill open positions and inflation running hot, this issue has the potential to be stubbornly persistent. Interestingly, it is the 10th-rated risk for 2032.

In the face of the disruption that lies ahead, survey participants are concerned about their agility to pivot in response to change — an incongruence that can lead to strategic failure.

- **Culture remains a priority and it has increased in significance relative to other risks.** In addition to resistance to change (as discussed above), concerns that the organization's culture may not sufficiently encourage the timely identification and escalation of significant market opportunities and emerging risk issues is the eighth-rated risk for the next 12 months and the 16th-rated risk for the next 10 years, whereas last year it was rated 11th and 23rd, respectively, for the same periods. This risk merits attention as it is vital that leaders remain in touch with business realities on the front lines.
- **Workplace evolution is more of a near-term issue.** Concerns over whether the organization can manage the ongoing demands on or expectations of a significant portion of the workforce either to work remotely or be a part of a transformed, collaborative hybrid work environment is the ninth-rated risk for 2023, whereas it is the 24th-rated risk for 2032. Leaders are having to deal with this issue in a flexible manner over the near term as the workplace continues to evolve. Longer-term, however, this is expected to be less of a concern.

Economic issues remain significant. To no surprise, concerns over economic conditions (including inflationary pressures) significantly restricting growth opportunities or impacting margins was the second-rated risk overall for 2023, up from fifth in 2022. With a tough global economic climate anticipated in 2023 as growth projections are cut and segments of the world's economy are forecasted to contract, economic headwinds may continue for an indeterminate period. This is the eighth-rated risk looking out 10 years, down from fifth last year. The uncertainty over central bank policies amid persistent inflation, rising labor costs, employment trends and supply chain disruptions along with the specter of a possible global recession on the horizon contribute to clouded perceptions and declining sentiments regarding the economy, both now and in the future.

Supply chain issues are elevated near term. Uncertainty surrounding the viability of key suppliers and energy sources, unpredictable shipping and distribution logistical issues, and price stability in the supply chain ecosystem are raising concerns over the ability to deliver products or services at acceptable margins. This risk is ranked fifth overall for 2023, up from 16th and 30th in 2022 and 2021, respectively. Its fall to the 21st-rated risk for 2032 suggests that survey participants believe the fundamentals underpinning this risk will normalize over the long term.

"Big data" is an even bigger issue long term. The risk of an inability to utilize advanced data analytics and "big data" to achieve superior market intelligence, gain insights on the customer experience, and increase productivity and efficiency is rated seventh overall looking 10 years out, up from 10th last year. Insightful data and market intelligence will win long term and everyone knows it, which is why

With a tough global economic climate anticipated in 2023 as growth projections are cut and segments of the world's economy are forecasted to contract, economic headwinds may continue for an indeterminate period.

this risk is ranked as high as it is relative to other risks. Interestingly, this risk fell to 14th in 2023 from eighth in 2022, which suggests there are likely more pressing issues facing business leaders near term.

Cybersecurity and data privacy have escalated as long-term priorities. Looking out 10 years, risks associated with data privacy and cyber threats are rated fifth and 13th, respectively, up from 11th and 16th, respectively, last year. Near term for 2023, they are rated 12th and 15th, respectively. The dynamic nature of the cyber threat landscape and the complexity of the data privacy regulatory environment continue to evolve. Of note, for both time horizons, the risk scores for data privacy and cyber threats increased year-over-year compared to our prior year results, underscoring that these risk issues remain critical concerns for the board and C-suite. That these risks are not ranked as high for 2023 as they are looking out 10 years once again suggests business leaders perceive more pressing issues over the next 12 months.

Environmental, social and governance (ESG) considerations vary in emphasis. As noted above, people, workplace and culture-related risks are top of mind. Hence, many matters pertaining to the "S" of ESG received significant play in this year's survey, as they did last year. As for the "E," climate change concerns continue to be greatest in those industries heavily reliant on market acceptance of fossil fuels. Among the notable ESG sub-themes:

- **DEI risk is rated about the same year-over-year but has declined in relative importance.** Concerns over the ability to align policies and processes around recruiting, retention, career advancement and reward systems with priorities surrounding diversity, equity and inclusion (DEI) are relatively the same this year compared to last year but are not as significant overall relative to other risks. This risk is the 24th-rated risk overall for 2023, compared with ranking 10th for 2022. It ranks 31st for 2032 compared with 15th for 2031.
- **Climate change risk has increased but is a priority primarily for fossil fuels-based companies.** Concerns over the growing focus on climate change and related ESG policies, regulations and expanding disclosure requirements have increased overall this year. However, at this time most respondents do not anticipate changes to their organizations' strategies and business models from climate-related matters with as much concern as they view the implications of other risks. This risk increases looking out longer term, ranking 20th 10 years out in this year's survey (down from 19th last year). Concerns related to climate change are greatest in industries concentrated in fossil fuels generation and use. A related point is that a lack of focus on climate matters could present talent retention challenges for younger generations.

At this time most respondents do not anticipate changes to their organizations' strategies and business models from climate-related matters with as much concern as they view the implications of other risks.

The largest risk increases tell a story of a changing world. Looking out 12 months, the five largest year-over-year increases are interest rate risk, geopolitical shifts and regional conflicts, risks related to global trade and market forces reshaping globalization, shareholder activist risk pursuant to performance shortfalls (including with respect to ESG expectations), and political uncertainty. Looking out 10 years, the five largest increases are risks related to geopolitical shifts and regional conflicts, activist shareholder risk, global trade and changing assumptions underlying globalization, adjusting to a remote and hybrid work environment, and political uncertainty. The world is changing now, with more change to come.

The risk of regulatory changes and scrutiny continues to loom large. While the risk of the regulatory environment affecting the processes, products and services of the business increased year-over-year both for 2023 and 2032, it declined in significance relative to other risks. This is the 16th- and ninth-rated risk overall for 2023 and 2032, respectively, down from 12th and seventh overall for 2022 and 2031, respectively. Notwithstanding that regulatory compliance risks are implicit in other risks our survey examined, survey participants continue to perceive other emerging issues at this time in the regulatory landscape that might affect the manner in which processes are designed and products or services are produced or delivered.

COVID has reached an endemic state. Risks related to the pandemic have declined this year, specifically market conditions imposed by and in response to COVID-19 and emerging variants.

A long-term outlook helps companies face the future with confidence. Five of the top 10 risks and six of the top 15 risks over the next decade are not in the top 10 and 15 lists, respectively, for 2023. Understanding and managing toward the long view facilitates resilience and agility in pivoting at the speed of change. This is why the elevation we observe in the resistance to change in this year's survey results is troubling. Complexity and volatility in the risk environment coupled with the velocity of change comprise a combustible mix when organizations fail to anticipate and adapt.

A lack of focus on climate matters could present talent retention challenges for younger generations.

The ever-changing risk landscape and the overall perceived magnitude and severity of risks should prompt boards and senior executives to scrutinize closely the approaches they use to keep an anticipatory eye on emerging risks. Unfortunately, some organizations continue to manage risks the way they have for many years, even though the profile of risks is changing dramatically as businesses and entire industries are transformed in the digital economy. The need for greater transparency about the nature and magnitude of risks undertaken in executing an organization's corporate strategy continues to be high as expectations of key stakeholders regarding strategic relevance, risk management and risk oversight remain strong.

This executive summary provides insights for 2023 and 2032 from 1,304 respondents in C-suite and board positions in organizations around the globe. The full report on this study (available online at erm.ncsu.edu and protiviti.com/toprisks) 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 the following pages of this executive summary, we offer a series of calls to action for board members and executive management to consider in critical areas of their business, and on page 30 we provide a series of diagnostic questions executives and directors may find helpful to consider when evaluating risk assessment and risk management processes.

We plan to continue conducting this risk survey annually so that we can stay abreast of key risk issues on the minds of directors and executives across the globe and observe trends in risk concerns over time. It is our desire that this report will increase executive and board understanding of potential risks on the near- and long-term horizons so that they can proactively navigate issues and challenges as they emerge for the benefit of their organization's reputation and brand image, key stakeholders and society as a whole.

The ever-changing risk landscape and the overall perceived magnitude and severity of risks should prompt boards and senior executives to scrutinize closely the approaches they use to keep an anticipatory eye on emerging risks.

A series of calls to action

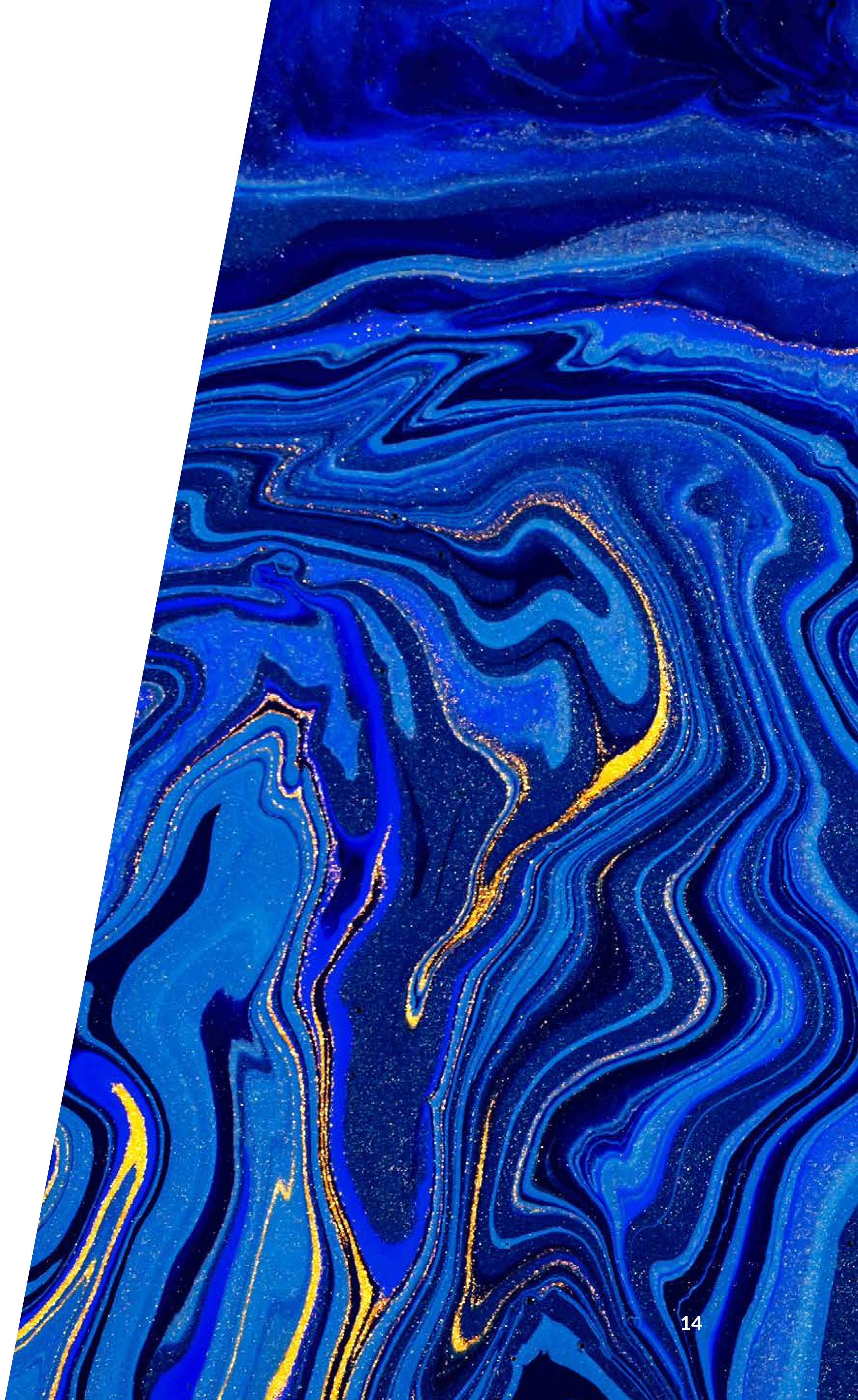
Our respondents reveal that the scope of global risks has become more expansive, and the number of different risks rated as top risk concerns is only growing in nature and type. The level of uncertainty in today's marketplace is rapidly evolving and presenting new risks that many previously thought were unimaginable.

The ever-changing risk landscape and the overall perceived magnitude and severity of risks should prompt boards and senior executives to scrutinize closely the approaches they use to remain focused on emerging risk issues and to integrate those insights into strategic decision-making. With near-term issues around economic uncertainty, labor costs, recovering supply chains, and myriad people and culture issues, organizations may tend to focus more on getting through 2023. No doubt, sustaining financial health in an economic downturn would be a priority. In such times, postponing planned and discretionary investments — "moonshot projects," in particular — is expected. But now may also be an opportune time for boards and C-suites to examine closely *where* to invest not only to preserve market image and branding but also foster a strong recovery when the economy bounces back and prospects for growth improve.

Given the long-term risk landscape, the question arises: What steps should be undertaken or continued over the near term to ensure the organization is sufficiently agile and resilient to thrive in a decade of disruption? Accordingly, in the interest of evaluating and improving risk governance capabilities in light of the findings in this report, we present the following calls to action that executives and directors can consider when evaluating their organization's readiness for the future as they cope with near-term business realities. We have centered these calls for actions along these key themes:

- Innovation and Transformation
- Digital Strategy
- Talent and Culture
- ESG

The above is not intended to be a comprehensive list of themes but, like everything else, we must start somewhere — and we chose these four themes. We also include a diagnostic in this report to assist companies in evaluating how they approach risk management and oversight in the digital age. It can be used to identify areas in which to improve risk assessment and risk management processes.



Call to Action — Innovation and Transformation

BY KIM BOZZELLA
GLOBAL LEADER, TECHNOLOGY CONSULTING, PROTIVITI

Our survey respondents see a world of transformation, innovation and disruptive change amid challenges relating to people, culture, security and resiliency. Over the next 10 years, their critical priorities include the acquisition and retention of talent and reskilling and upskilling existing employees to sustain their organization's relevance and realize the full potential of its transformation journey. With incumbents facing more agile business models, technology is now the path forward rather than a mere tool.

Following are steps companies should undertake or continue over the near term to ensure they can increase their agility and sustain their transformation journey successfully over the long term:

- **Modernize legacy applications —** Address accumulated "technical debt" to drive efficiency in business and IT systems, reduce infrastructure costs by streamlining services and moving core applications and services to the cloud, and improve capacity to innovate to enrich customer experiences, digitize products and services, inform decision-making, and compete with "born digital" players with architecture built optimally from the ground up.
- **Improve agility through rapid response and strong operational resilience —** Become a resilient and compliant organization that can readily respond to outages, crises and other threats to running the business. Strong resilience is inclusive of operational resilience, cyber resilience, technical resilience, business continuity management and managing third-party vendor risk.
- **Capitalize on the emergence of new technology platforms and capabilities —** Invest in leveraging new platforms and architectures for building and running business applications to enable better access to data, provide flexibility and faster time to market, and support digital capabilities to deliver differentiated experiences. Deploy greater process automation and intelligent technologies such as AI, machine learning and augmented reality/virtual reality to reimagine existing processes and alleviate risks from the inevitable shifts in labor availability and costs.
- **Leverage insights and analytics from data —** Employ advanced business analytics and reporting to evolve the organization, drive strategic decision-making, accelerate the achievement of business goals and be more competitive in the market.
- **Maximize customer engagement —** Focus on the experiences of users and consumers to drive interaction through a modern, innovative operating model. Decisions based on insightful customer and user analytics are more likely to achieve business success. Invest in an event-streaming platform that facilitates smart apps that can react to events as they happen by developing tailored and immediate experiences customers are expecting.
- **Prioritize cybersecurity and data privacy —** Harness the power of effective cybersecurity frameworks to combat a constantly changing threat environment. Balance identity and access management to ensure maximum speed of user access while managing risk. Ensure proper management of sensitive customer data while complying with applicable legal and regulatory requirements for collecting, storing, securing, processing and using sensitive data.
- **Determine the capabilities needed to manage, secure and govern APIs —** The growing use of application programming interfaces (APIs) in today's digital economy ("the API economy") has brought about new business models, risks and opportunities. As the organization adopts architecture for providing standards enabling computer systems to communicate with each other, leaders must manage the exposure of the organization's digital services and assets through APIs.

Call to Action — Digital Strategy

BY JOAN SMITH
GLOBAL LEADER, PROTIVITI DIGITAL

Concerns about near- and long-term issues frame a tough environment for strategists and executives tasked to bring a digital mindset to sustaining strategic relevance and continuously improving customer-facing and back-office processes. Leaders need only reflect on the reimagining of business since the turn of the century to gauge the implications of accelerated change over the next decade. Speed and scale are being augmented with greater bandwidth at lower costs, enabling new ways to connect with customers and a transformation of how companies as well as whole industries operate. That is why companies should undertake appropriate steps over the near term to ensure they remain connected to the customer experience, invest in future growth, and position themselves to innovate and compete during the next phase of growth as well as in the evolving global economy over the longer term. To that end:

- **Start with data-driven customer insights.** Collect the data needed to uncover and connect deep customer insights vital to informed business decisions and operational improvements at the speed needed to compete and retain market relevance.
- **Connect technology to customer value.** View technology in terms of the customer experience rather than the customer process. Combine a sales, service and marketing perspective and customer behavioral insights to break through internal barriers and drive improvements to the customer experience. Focus on harmonization between automation and personalization that meets customers' expectations of a personalized experience yet often requires an integration of competencies across the organization that can be challenging to orchestrate.
- **Weave innovation into the fabric of your operating model.** In today's market, a truly differentiated business or customer strategy is harder to maintain and easier to replicate than it used to be. Ways of working that infuse innovation into the business — with the intention of continuously differentiating in the market — are required to sustain competitive advantage. Couple technology and business operations expertise with insightful customer knowledge and an innovative culture that encourages experimentation to design new products, business models and growth strategies facilitated by automation and digital agility. Apply an innovative mindset across all areas of the business to foster value-added outcomes in growing and scaling the business.
- **Employ agility as a business mindset versus just a methodology.** Uncertainty is here to stay. Yet with uncertainty also comes opportunity. Organizations need to create flexibility and infuse agility into operating principles and processes to navigate continued waves of change. Prioritization and the ability to flex to take advantage of new potential value streams, rapidly solve for jobs to be done, and facilitate pivots for changing customer needs, shifts in supply/demand or advances in enabling technology will prove decisive in defining the companies that emerge as leaders from periods of downturn or business disruption.

Call to Action — Talent and Culture

BY FRAN MAXWELL
GLOBAL LEADER, WORKFORCE AND ORGANIZATIONAL TRANSFORMATION, PROTIVITI

People- and culture-related issues dominate the top 10 global risk issues for 2023, as do concerns related to the economy. Many boards and executives, especially chief human resources officers, understand that economic headwinds can be a precursor to job cuts that, if overdone, will create long-term challenges to managing human capital. That is why the following steps should be emphasized over the near term to sustain progress in transforming talent management and preserving the culture:

- **Make your talent your customer.** The organization's focus on the customer experience should extend to its own people and talent. Many companies can slice and dice data to understand their customers, but fewer do this with regard to the talent in their enterprise. This is an opportunity for positive change and growth. As part of these efforts, position an advocate for the preservation of talent and culture at the decision-making table as the organization focuses on sustaining its financial health.
- **Be prudent and thoughtful in decision-making.** Should a recession inhibit growth:
  - Pursue all appropriate measures to preserve operating margin before moving forward with talent cuts. For example, reduce other SG&A costs, consider outsourcing noncore activities, sell noncore assets, adjust base and incentive compensation and benefits, etc.
  - Focus on retaining "A" players by designing and deploying repeatable assessments of the organizational talent and skills needed to exit a recession in a strong position to capitalize on market opportunities.
  - Be mindful of the employee experience and employee well-being by aligning these areas with the customer experience in ways that, to the extent possible, reflect the organization's unique employee value proposition. Also, maximize the flexibility of work arrangements.
- **Treat people like people.** Should workforce reductions and changes to hiring practices (e.g., a hiring freeze) become necessary, make decisions objectively and approach them smartly. There is a right and wrong way to approach these matters.
  - Communicate thoughtfully and frequently.
  - Understand the talent and skills required for the organization to achieve its strategy as the economy recovers.
  - Focus on workforce reductions that eliminate overlaps in skills and capabilities.
  - Consider third-party resources to provide certain skills.
  - Explore opportunities to eliminate jobs that can be displaced by technology with the attendant workforce reskilling and upskilling.
- **Build a resilient culture.** Inculcate a philosophy of embracing change.
- **Integrate upskilling and retention strategies.** Ensure the organization's investments in upskilling employees are fully realized.
- **Make succession planning a strategic priority.** This needs to happen beyond the senior executive suite. Devise and test knowledge transfer processes and leadership development plans to increase flexibility and reduce the high costs and stress associated with reassigning roles and responsibilities in a reactive manner. Consider how the organization is going to retain its key people and keep them engaged long-term to increase the strength of the executive bench.
- **Keep DEI and ESG top of mind.** Monitor employee sentiment on DEI and other ESG matters to identify and assess the broad range of human capital risks to inform decision-making processes on taking corporate stances on contentious issues.

Call to Action — ESG

BY CHRIS WRIGHT
GLOBAL LEADER, ESG STEERING COMMITTEE, PROTIVITI

With issues related to the "S" of ESG rated highly in our survey and matters related to the "E" and "G" evolving, many organizations have sustainability reporting and its related operational activities and risks on their radar. ESG has its share of critics and some ESG initiatives are under increased financial pressure as CEOs and investors focus more sharply on the risk-reward balance in the face of economic and geopolitical headwinds. The near-term challenge related to ESG is navigating uncertainties in the marketplace while keeping an eye on positioning the organization and its values, reputation and brand for the long term. To that end, the following steps merit consideration:

- **Prioritize with a balanced perspective.** Give the rising cost of capital its due consideration when evaluating and prioritizing ESG initiatives. At the same time, be mindful of regulatory and stakeholder interests as the focus on preserving financial vibrancy intensifies. View ESG considerations the same way everything else involving allocation of capital and the future is viewed. For example, what is the strategic opportunity, what are the risks and how is return on capital measured?
- **Consider ESG a fiduciary responsibility.** Don't view ESG as all and only about climate change and reporting. Rather, view it through the lens of a leader's fiduciary responsibility to ensure the long-term viability and well-being of the company by addressing the opportunities and risks posed by relevant ESG matters.
- **Tie ESG into the enterprise risk management (ERM) discipline.** Think of sustainability priorities as a compendium of risks to the organization (e.g., climate change, talent retention, succession, supply chain, DEI, workforce planning, cyber, and board composition and culture, to name a few) that relate to the "E," the "S" and the "G" in ESG. Add these risks to the scope of enterprise risk assessments and integrate them into strategy setting, performance management and, if critical to the enterprise, periodic reporting to the executive team and board.
- **Get it together in the proper order.** Don't let the reporting tail wag the operational dog. First understand where you stand, then assess what you want to accomplish, and then (and only then) define how you'll report on activities and outcomes.
- **Establish accountability for results.** Set goals and create accountability around ESG imperatives and rank those imperatives by level of importance considering the ongoing storyline the company narrates to the street. Follow up and recalibrate regularly while keeping an eye toward delivering expected financial results.

The top risk concerns for 2023

The list of top 10 global risks for 2023, as noted by all survey participants, appears in Figure 2, along with their corresponding 2022 and 2021 scores (for those risks included in the prior years' surveys).

FIGURE 2

Top 10 risks for 2023

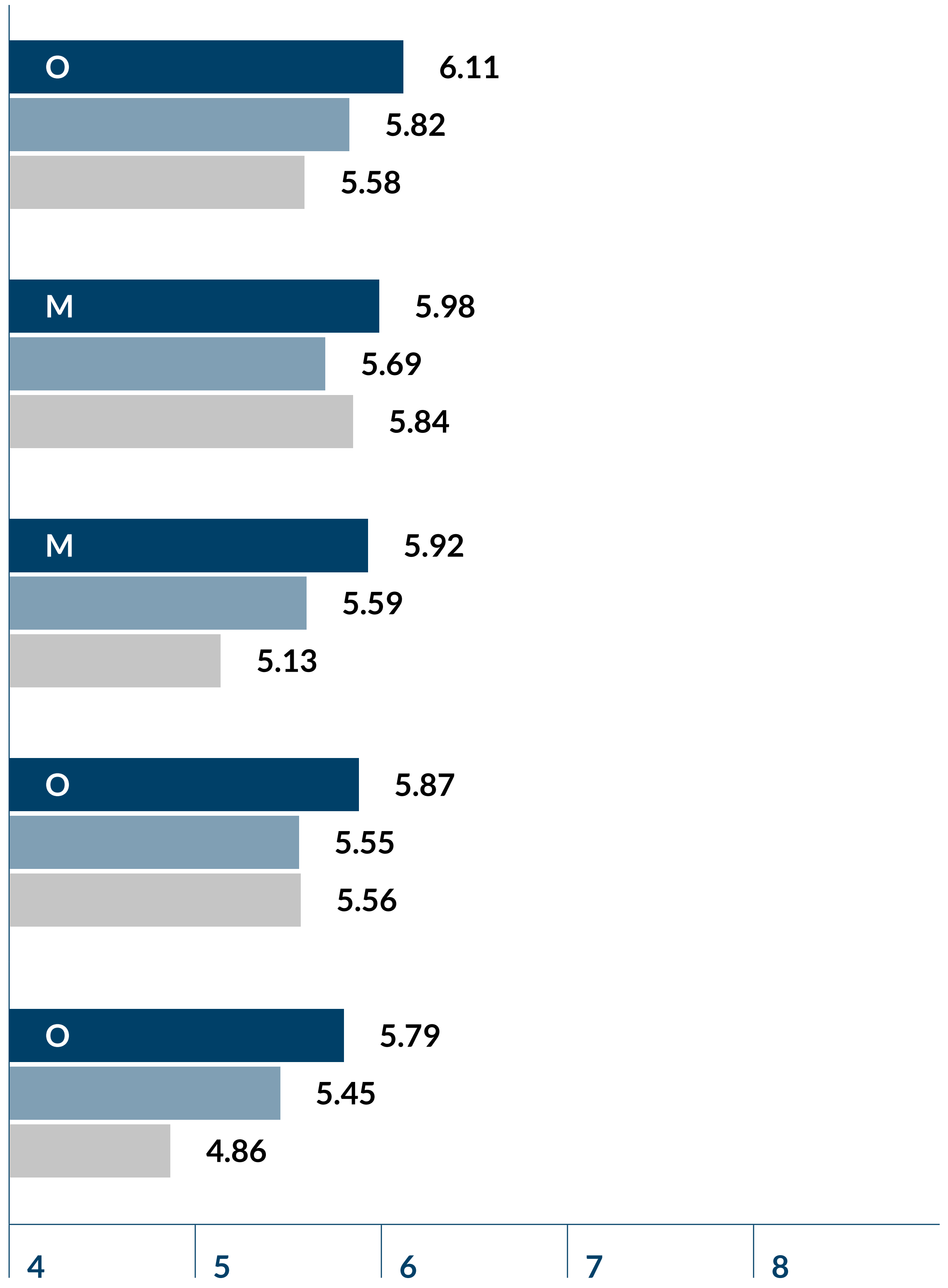
Our organization's succession challenges and ability to attract and retain top talent and labor amid the constraints of a tightening talent/labor market may limit our ability to achieve operational targets

Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organization

Anticipated increases in labor costs may affect our opportunity to meet profitability targets

Resistance to change in our culture may restrict our organization from making necessary adjustments to the business model and core operations on a timely basis

Uncertainty surrounding our organization's core supply chain including the viability of key suppliers, scarcity of supplies, energy sources, unpredictable shipping and distribution logistical issues, or lack of price stability in the supply chain ecosystem may make it difficult to deliver our products or services at acceptable margins



M Macroeconomic Risk Issue S Strategic Risk Issue O Operational Risk Issue ■ 2023 ■ 2022 ■ 2021

FIGURE 2

Top 10 risks for 2023 (continued)

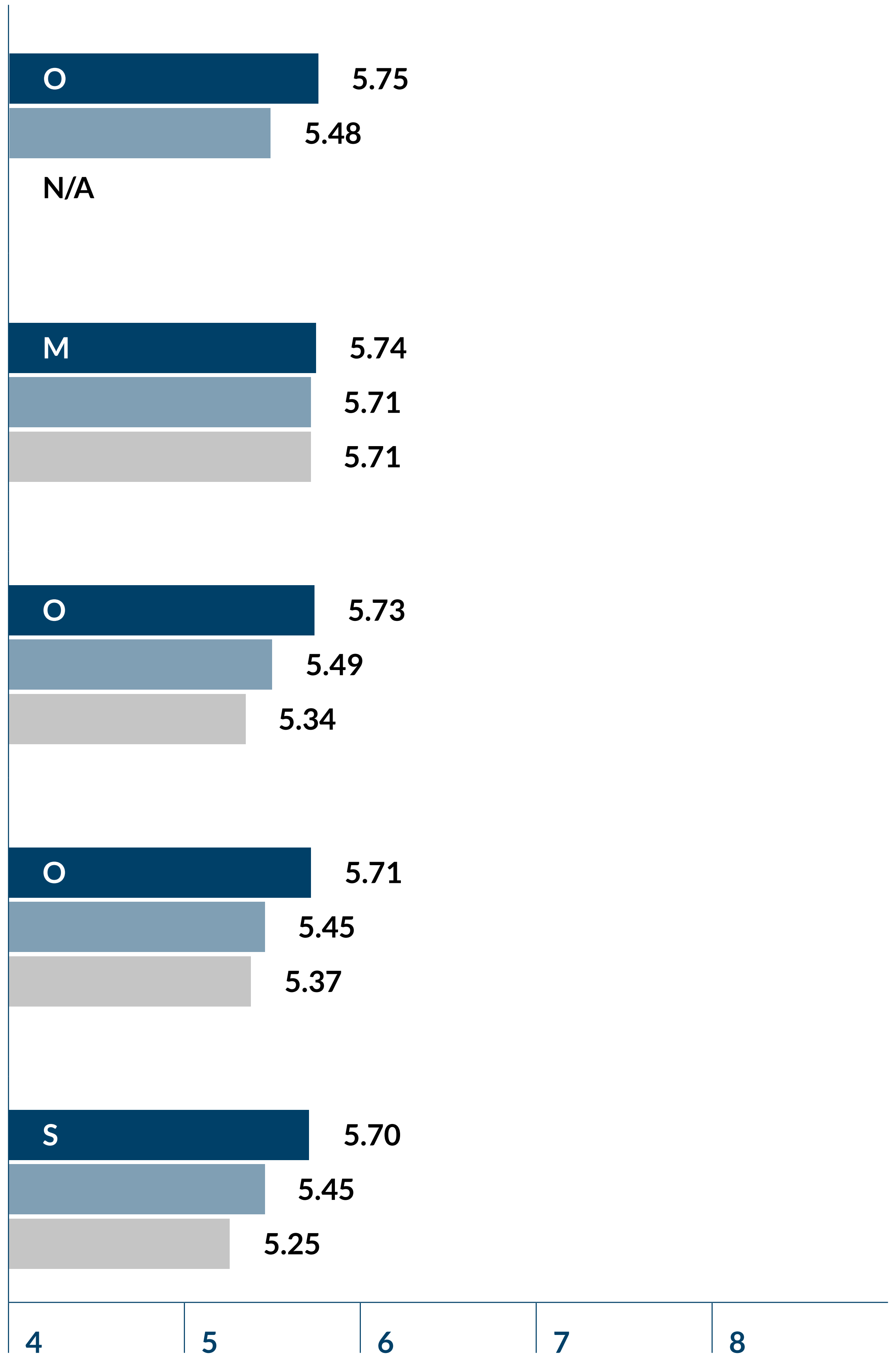
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labor, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organization's culture and business model

The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organization may require new skills that either are in short supply in the market for talent or require significant efforts to upskill and reskill our existing employees

Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues and market opportunities that have the potential to significantly affect our core operations and achievement of strategic objectives

Our approach to managing ongoing demands on or expectations of a significant portion of our workforce to "work remotely" or increased expectations for a transformed, collaborative hybrid work environment may negatively impact our ability to retain talent as well as the effectiveness and efficiency of how we operate our business

Our organization may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation



M Macroeconomic Risk Issue S Strategic Risk Issue O Operational Risk Issue ■ 2023 ■ 2022 ■ 2021

The top 10 global risks for 2032 appear in Figure 3, alongside scores from our two prior years (also looking out a decade ahead when asked).

FIGURE 3

Top 10 risks for 2032

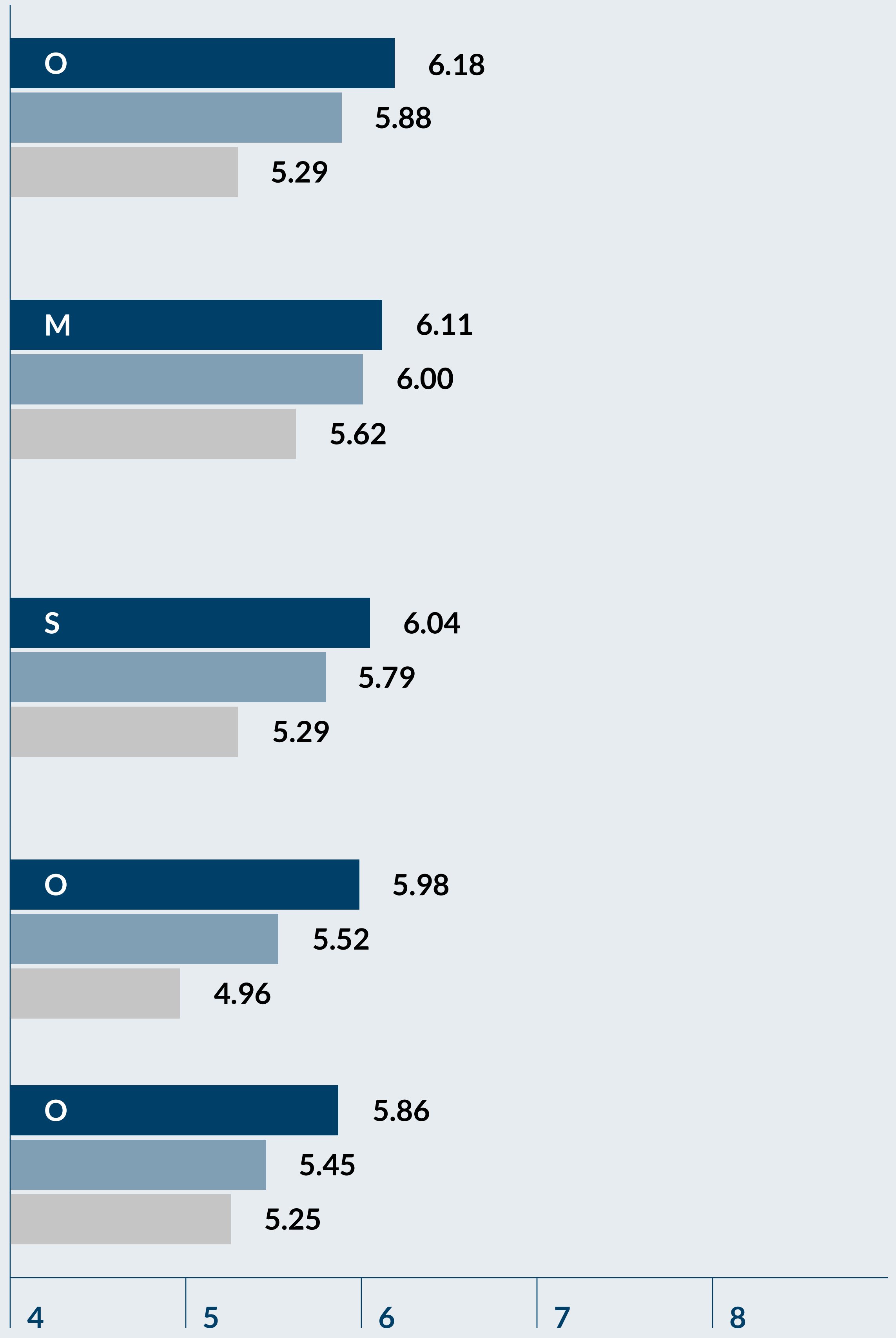
Our organization's succession challenges and ability to attract and retain top talent and labor amid the constraints of a tightening talent/labor market may limit our ability to achieve operational targets

The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organization may require new skills that either are in short supply in the market for talent or require significant efforts to upskill and reskill our existing employees

Rapid speed of disruptive innovations enabled by advanced technologies (e.g., artificial intelligence, automation in all of its forms, hyper-scalable platforms, faster data transmission, quantum computing, blockchain, digital currencies and the metaverse) 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

Resistance to change in our culture may restrict our organization from making necessary adjustments to the business model and core operations on a timely basis

Ensuring data privacy and compliance with growing identity protection expectations and regulations may require alterations demanding significant resources to restructure how we collect, store, share and use data to run our business



M Macroeconomic Risk Issue S Strategic Risk Issue O Operational Risk Issue ■ 2032 ■ 2031 ■ 2030

FIGURE 3

Top 10 risks for 2032 (continued)

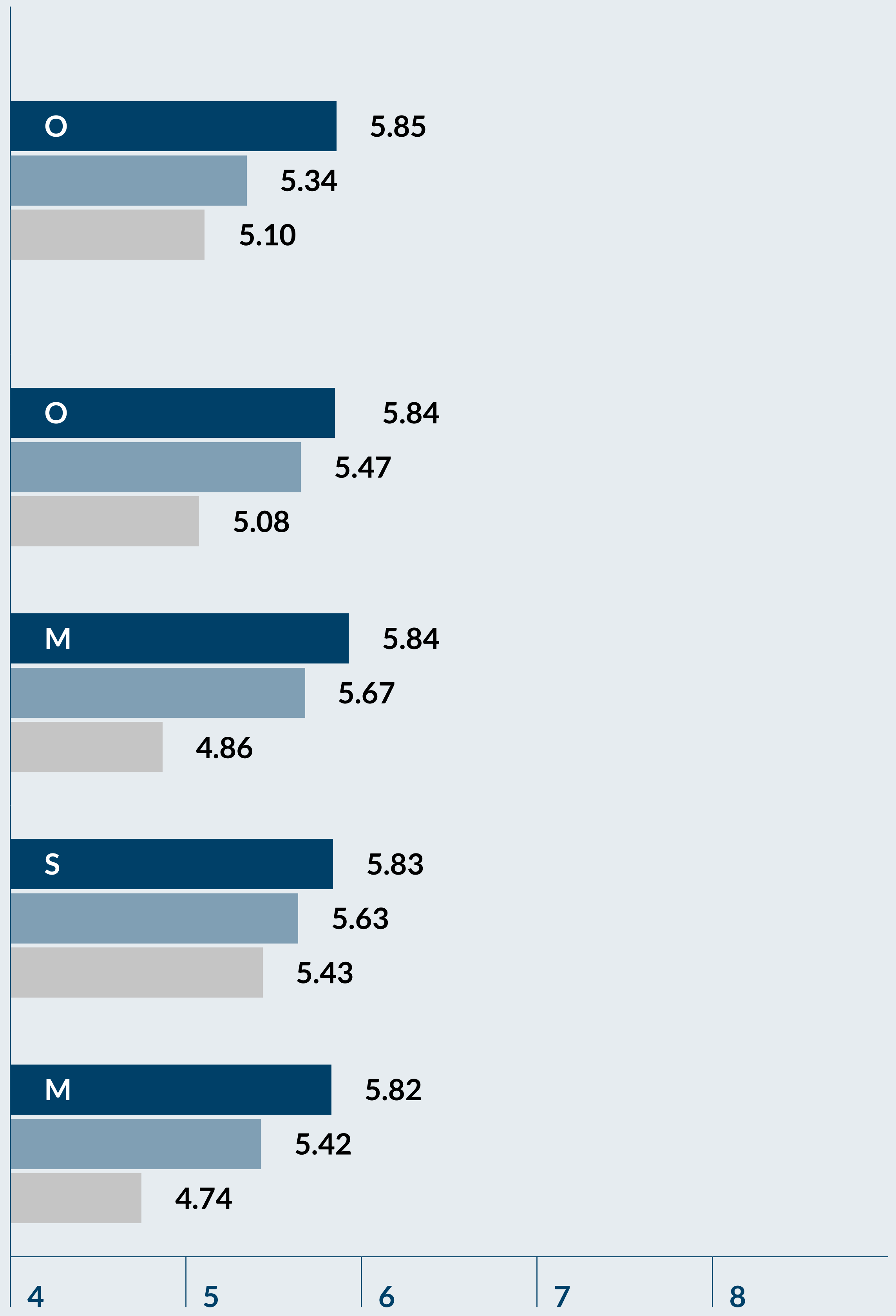
Our existing operating processes, in-house talent, legacy IT infrastructure, lack of digital expertise and/or insufficient digital knowledge and proficiency in the C-suite and boardroom may result in failure to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, including those that are either “born digital” or investing heavily to leverage technology for competitive advantage

Inability to utilize data analytics and “big data” to achieve market intelligence, gain insights on the customer experience, and increase productivity and efficiency may significantly affect our management of core operations and strategic plans

Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organization

Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered

Anticipated increases in labor costs may affect our opportunity to meet profitability targets



M Macroeconomic Risk Issue | S Strategic Risk Issue | O Operational Risk Issue | 2032 | 2031 | 2030

TABLE 1

Perceived impact for 2023 and 2032 — by role

Macroeconomic Risk Issues	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organization	2023	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Anticipated increases in labor costs may affect our opportunity to meet profitability targets	2023	🔴	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🔴
Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organization to address	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Political uncertainty surrounding the influence and continued tenure of key global leaders, shifts in the balance of global power, and political extremism may impact the stability of national and international markets to the point of significantly limiting our growth opportunities	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organization may require new skills that either are in short supply in the market for talent or require significant efforts to upskill and reskill our existing employees	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
Geopolitical shifts, regional conflicts, and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth and profitability objectives	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡

Macroeconomic Risk Issues (continued)	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
The current interest rate environment may have a significant effect on the organization's capital costs and operations	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Government policies surrounding public health practices (in response to the pandemic) and stimulus to drive recovery and national resilience may significantly impact the performance of our business	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟡
Uncertainties from reliance on international markets for key elements of our supply chain will continue to create significant challenges for us to meet revenue/profitability goals	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Shifts in perspectives and expectations about social issues and priorities surrounding diversity, equity and inclusion (e.g., board composition, representation in the C-suite and leadership ranks, and onboarding policies) are occurring faster than the pace at which our organization is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	2023	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalization may affect our ability to operate effectively and efficiently in international markets	2023	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organization	2023	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟡

Strategic Risk Issues	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Our organization may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	2023	🟡	🔴	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡
	2032	🔴	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organization	2023	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Ease of entrance of new competitors into the industry and marketplace or other significant changes in the competitive environment (such as major market concentrations due to M&A activity) may threaten our market share	2023	🟡	🔴	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Growth opportunities through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	2023	🟡	🔴	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our organization may not be able to adapt its business model to embrace the evolving "new normal" imposed on our business by the ongoing pandemic and emerging social change	2023	🟡	🟡	🟡	🔴	🟢	🟢	🔴	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟡
Rapid speed of disruptive innovations enabled by advanced technologies (e.g., artificial intelligence, automation in all of its forms, hyper-scalable platforms, faster data transmission, quantum computing, blockchain, digital currencies and the metaverse) 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	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🔴	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴

Strategic Risk Issues (continued)	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Growing focus on climate change and related ESG policies, regulations and expanding disclosure requirements, as well as expectations among governments, current and potential employees, and other stakeholders about "green" initiatives, supply chain transparency, reward systems, and other governance and sustainability issues, may require us to significantly alter our strategy and business model in ways that may be difficult for us to implement as timely as the actions of our competitors	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Substitute products and services may arise from competitors that may enhance the customer experience and affect the viability of our current business model and planned strategic initiatives	2023	🟡	🟡	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🔴	🟡	🟡	🟡	🟡	🔴
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organization's strategic plan and vision	2023	🟡	🟡	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behavior to digital channels, may continue to impact customer demand for our core products and services	2023	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡
Rapidly expanding developments in social media and platform technology innovations may significantly impact how we do business, interact with our customers, ensure regulatory compliance and/or manage our brand	2023	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡

Operational Risk Issues	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Our organization's succession challenges and ability to attract and retain top talent and labor amid the constraints of a tightening talent/labor market may limit our ability to achieve operational targets	2023	🔴	🔴	🟡	🔴	🔴	🔴	🔴	🟡	🟡	🟡
	2032	🔴	🔴	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
Resistance to change in our culture may restrict our organization from making necessary adjustments to the business model and core operations on a timely basis	2023	🔴	🟡	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🔴	🔴	🟡	🟡
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labor, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organization's culture and business model	2023	🔴	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our organization may not be sufficiently prepared to manage cyber threats such as ransomware and other attacks that have the potential to significantly disrupt core operations and/or damage our brand	2023	🟡	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡
	2032	🔴	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🟡
Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues and market opportunities that have the potential to significantly affect our core operations and achievement of strategic objectives	2023	🟡	🟡	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our approach to managing ongoing demands on or expectations of a significant portion of our workforce to "work remotely" or increased expectations for a transformed, collaborative hybrid work environment may negatively impact our ability to retain talent as well as the effectiveness and efficiency of how we operate our business	2023	🟡	🟡	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡

Operational Risk Issues (continued)	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Uncertainty surrounding our organization's core supply chain including the viability of key suppliers, scarcity of supplies, energy sources, unpredictable shipping and distribution logistical issues, or lack of price stability in the supply chain ecosystem may make it difficult to deliver our products or services at acceptable margins	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Third-party risks arising from our reliance on outsourcing and strategic sourcing arrangements, ecosystem partners, IT vendor contracts, and other partnerships/joint ventures to achieve operational and go-to-market goals may prevent us from meeting organizational targets or impact our brand image	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🟡
Ensuring data privacy and compliance with growing identity protection expectations and regulations may require alterations demanding significant resources to restructure how we collect, store, share and use data to run our business	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Our existing operating processes, in-house talent, legacy IT infrastructure, lack of digital expertise and/or insufficient digital knowledge and proficiency in the C-suite and boardroom may result in failure to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, including those that are either "born digital" or investing heavily to leverage technology for competitive advantage	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
Inability to utilize data analytics and "big data" to achieve market intelligence, gain insights on the customer experience, and increase productivity and efficiency may significantly affect our management of core operations and strategic plans	2023	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🔴

Operational Risk Issues (continued)	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
The rising threat associated with catastrophic natural disasters and weather phenomena (e.g., wildfires, floods, extreme heat/ cold, cyclones/hurricanes/typhoons) may create significant operational challenges that threaten our assets, employees, and our ability to deliver products and services to our customers	**2023**	🟡	🟡	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our ability to meet expectations around protecting the health and safety of employees, customers, suppliers and the communities in which we operate may be insufficient to receive market permission to operate or encourage people to work for us or do business with us	**2023**	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡

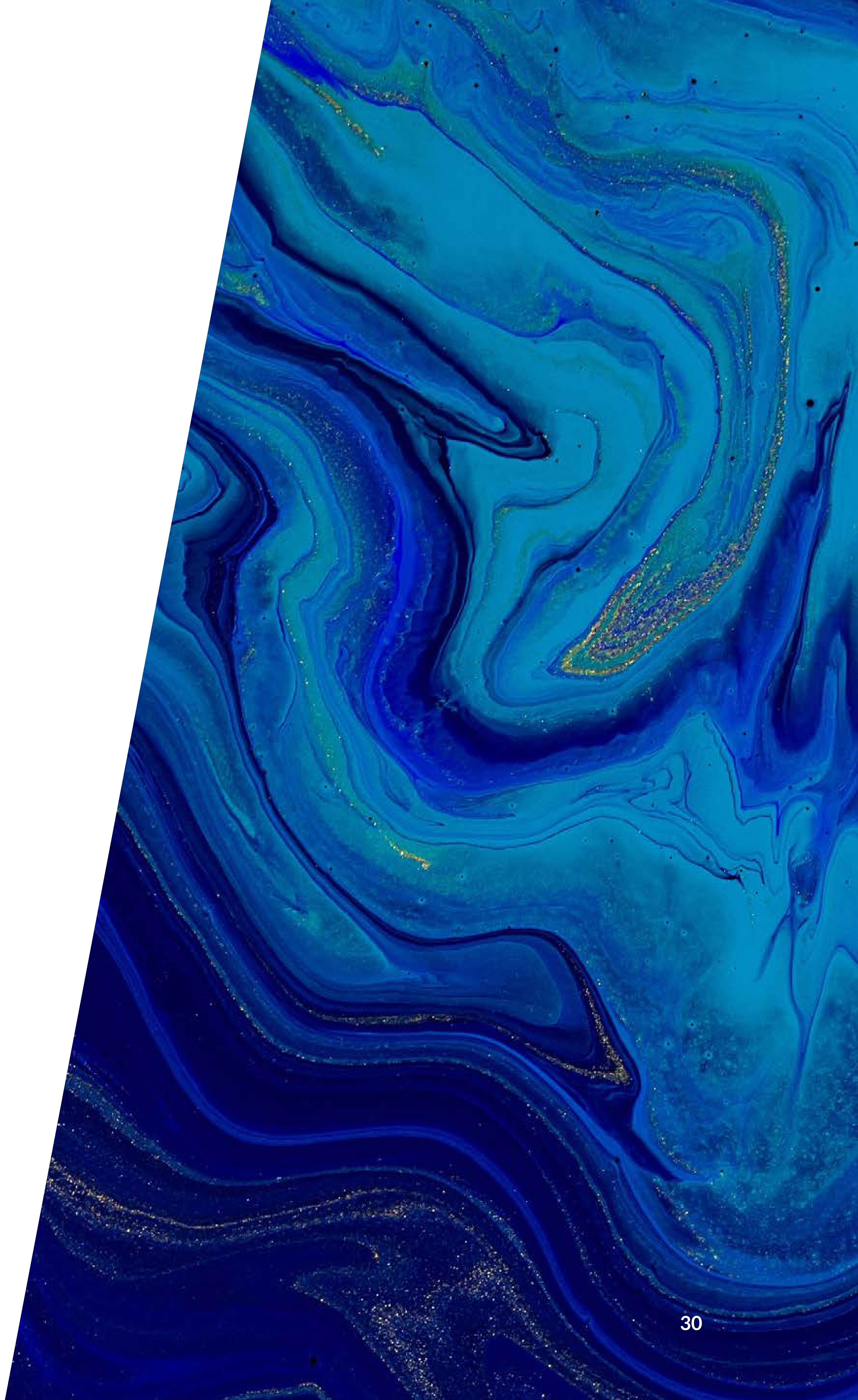
Evaluating an organization’s approach to risk oversight

This report provides insights from 1,304 board members and executives about risks that are likely to affect their organizations in the short term (over the next 12 months) and over the next decade (2032). Our respondents reveal that the scope of global risks has become more expansive and the number of different risks rated as top risk concerns is only growing in nature and type. While some risks critical in the prior year remain top of mind for 2023, there are noticeable shifts in what comprise the top risks for 2023 and how they differ from those anticipated in the next decade, reminding executives that risks are constantly emerging and evolving.

Ongoing events continue to present major challenges for the next 12 months. The level of uncertainty in today’s marketplace is rapidly evolving and presenting new risks that many previously thought were unimaginable. The ever-changing risk landscape and the overall perceived magnitude and severity of risks should prompt boards and senior executives to closely scrutinize the approaches they use to keep an eye on risks emerging around the corner.

Unfortunately, some organizations continue to manage risks the way they have for many years, even though the profile of risks is evolving. As business transforms because of the rapidly advancing digital economy and, for many organizations, the transition to permanent hybrid work environments that was accelerated by the pandemic, the risk profile is most certainly not yesterday's risks. A focus on financial and compliance risks using static analog-age tools without any conception of the organization’s risk appetite leaves decision makers across the organization to their own devices. Soon those organizations may realize, once it’s too late, that their level of investment in risk management and willingness to engage in robust tools to identify, manage and monitor risk are inadequate.

Boards of directors and executive management teams cannot afford to manage risks casually on a reactive basis. Events of the past have accentuated the importance of adapting to change and preparedness for the unexpected. Immature, ad hoc approaches to risk management are being outpaced by the rapid pace of disruptive innovation and technological developments in an ever-advancing digital



world. The focus today is on agility and resilience as much as it is on prevention and detection.

Given the disruptive environment, now may be an opportune time for boards and C-suites to examine closely how their organizations approach risk management and oversight in the digital age to pinpoint aspects requiring improvement. Managing today's risks using outdated techniques and tools may leave the organization exposed to significant, undesirable and potentially disruptive risk events that could obviate its strategy and business model and threaten its brand and reputation — even its very survival.

Accordingly, in the interest of evaluating and improving risk management capabilities 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 and risk management processes. A "no" response to any of the following questions should be considered as a possible area of improvement.

Ensure our risk management approach is sufficiently robust

Because risks are constantly changing, the risk management process needs to be repeatable, clearly defined and adequately resourced to ensure business leaders receive the information they need to stay abreast of emerging issues:

- Is the process supported by an effective, robust methodology that is definable, repeatable and understood by key stakeholders?
  - Does our approach to risk identification foster consideration of risks that may have a higher-level strategic impact and that may be triggered by external events or competitor actions that are beyond our organization's control?
  - Does the process delineate the critical enterprise risks from the day-to-day risks of managing the business so we are able to focus the dialogue in the C-suite and boardroom on the risks that matter most?
  - Do we engage all the right stakeholders in the risk identification process?
  - Would most stakeholders describe our approach to risk management as one that is dynamic, engaging and insightful versus one that is stale, siloed across disparate functions in the organization and/or requiring a refresh?
  - Is our approach appropriately balanced with respect to focusing on the macroeconomic, strategic, reputational, operational and compliance risks that matter?
  - How extensively do we evaluate the effectiveness of preparedness and response plans that are intended to help prevent risk events from occurring and that might reduce the impact of risk events should they occur?
- Is there a process for identifying emerging risks and does the risk identification process allow the board and management enough time to consider adequately response plans to these risks?
- Does our management dashboard system:
  - Include robust key risk indicators that help the leadership team monitor shifts in relevant external trends?
  - Cover the most critical enterprise risks?
  - Provide an effective early warning capability that enables the organization to act as an "early mover" in response to market opportunities and emerging risks?
- What insights have the ongoing pandemic and other related risk issues revealed about limitations in our organization's approach to risk management?
  - Was our organization prepared to deal with the challenges we have experienced over the last two years?
  - Was our organization's business continuity plan effective in addressing the enterprisewide impact of COVID-19? If there were holes in the plan, have we addressed them?
  - Did our employees have all the technology and tools they needed?

- – Did urgent efforts to adopt new tools and technologies and transition to a virtual workplace achieve acceptable productivity and returns?
- – In transitioning to a work-from-anyplace virtual environment, were we able to address the information security issues created by the transition?
- – Was our culture resilient enough to pivot in response to the pandemic's effects on our customers, employees, third-party relationships and supply chain?
- – Have we performed a post-mortem to understand what we learned from the pandemic experience?

Evaluate whether our risk focus is positioned to provide strategic value

Given the pace of change experienced in the industry and the relative riskiness and nature of the organization's operations:

- Are we centering our focus on risks in the context of our organization's execution of the strategy, achieving its business objectives, sustaining its operations, and preserving its brand image and reputation?
- Is our leadership's knowledge of top risks enhanced by the organization's risk management process serving as a value-added input to the strategy-setting process?
- Does our risk management process consider a sufficient time horizon to pick up looming strategic and emerging risks ("gray rhinos"), e.g., the longer the horizon, the more likely new risk issues will present themselves?
- Is our focus on external risks linked to geopolitical shifts, emerging disruptive innovations and changes in macroeconomic factors?
- In our ongoing assessment of risk, do we consider the effects of changes in internal operations, personnel, processes, technologies, suppliers and third-party vendors?
- Does our risk management process consider extreme as well as plausible scenarios? Do we have meaningful discussions of potential "black swan" and "gray rhino" events?
- Do we deploy scenario analysis techniques to understand better how different scenarios will play out to understand their implications to our strategy and business model? Are response plans updated for the insights gained from this process?
- Do we encourage the identification of opportunities to take on more risk on a managed basis? For example, is risk management effectively integrated with strategy-setting to help leaders make the best bets from a risk/reward standpoint that have the greatest potential for creating enterprise value versus a mere appendage?
- Do the board and senior management receive risk-informed insights, competitive intelligence and information regarding opportunities to secure early-mover positioning in the marketplace? Do the insights, intelligence and information received foster more effective dialogue in the boardroom and C-suite regarding future opportunities, exposures and vulnerabilities?

Clarify accountabilities for managing risks

Following completion of a formal or informal risk assessment:

- Are risk owners assigned for newly identified risks? Are these owners held accountable for managing their assigned risks?
- Are effective risk response action plans developed to address the risk at the source? Are risk owners accountable for the design and execution of those responses?
- Is the organization satisfied that its oversight and governance of its business continuity planning and operational resilience activities are sufficient in scope enterprisewide and not limited to certain aspects of the organization (e.g., information technology, supply chain operations)?
- Is there an effort to source the root causes of certain risks that warrant an improved understanding of how they can be better managed? Does the sourcing process look for patterns that connect potential interrelated risk events?

- Are we monitoring the business environment over time for evidence of changes that may invalidate one or more critical assumptions underlying our organization's strategy? If so, when there is evidence that one or more critical assumptions underlying the strategy are becoming, or have become, invalid, does management act in a timely fashion on that knowledge to revisit the strategy and undertake necessary mid-course adjustments?
- Do decision-making processes consider the impact of a particular decision on the organization's risk profile?
  - Is there actionable, current risk information that is widely shared to enable more informed decision-making across the organization?
  - Have we sufficiently communicated the relative value and importance of considering risk in decision-making across the enterprise?
  - Is the board sufficiently involved in the decision-making process, particularly when it involves a significant acquisition of new businesses, entry into new markets, the introduction of innovative technologies or alteration of key assumptions underlying the strategy?
- Are significant risks related to the execution of the strategy and business model monitored over time to consider whether:
  - Changes have occurred requiring corrective action?
  - The organization continues to operate within established risk tolerances in meeting key business objectives?

Communicate an enterprise view of top risks and board risk oversight

With respect to communicating and overseeing the risk profile:

- Is the board informed of the results of management's risk assessment on a timely basis? Do directors agree with management's determination of the significant risks?
- 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 emerging risks or significant changes in the organization's risk profile?
- With respect to the most critical risks facing the organization, do directors understand, at a high level, the organization's responses to these risks? Is there an enterprisewide process in place that informs the board's risk oversight effectively?
- Is there a periodic board-level dialogue with management regarding the organization'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 implemented?
- Given the organization's risk profile, does the board periodically consider whether it has access to the diverse expertise and experience needed — either on the board itself or through access to external advisers — to provide the necessary oversight and advice to management? For example, is there sufficient digital savviness and experience on the board or in the boardroom?

Assess impact of leadership and culture on our risk management process

Because culture and leadership significantly impact the organization's approach to risk oversight:

- Is the board's and the C-suite's support for more robust risk management processes evident to key stakeholders across the organization?
  - Is our risk management process helping to foster robust discussion and dialogue about top risk issues among senior management and the board?
  - Is the board asking for more risk management information and focused on advancing the organization's risk management capabilities?
- Is there a willingness among the leadership team and business units to be more transparent about existing risk issues when sharing information with one another?
- Do we have an accurate read on how our organization's culture is affecting how employees engage in risk management processes and conversations?
- Are warning signs communicated by the risk management, compliance and ethics, or internal audit functions addressed in a timely fashion by executive and operational management?
- Do we have a "speak up" culture that encourages transparency and sharing of contrarian information and bad news? Are our employees convinced they can "speak up" without fear of repercussions to their careers or compensation? For example, does the process:
  - Encourage an open, positive dialogue for identifying and evaluating opportunities and risks?
  - Focus on reducing the risk of undue bias and groupthink?
  - Give adequate attention to differences in viewpoints that may exist across different executives and global jurisdictions?
- Is adequate attention given to red flags indicating warning signs of a dysfunctional culture that suppresses escalation of important risk information or encourages unacceptable risk taking?

These and other questions can assist organizations in defining their specific risks and assessing the adequacy of the processes informing their risk management and board risk oversight. We hope the important insights about the perceived risks on the horizon for 2023 and a decade later (2032) provided in this executive summary prove useful. We also hope that the insights, calls for action and the above diagnostic serve as a catalyst for an updated assessment of risks and improvements in risk management capabilities within organizations.

Methodology

We are pleased with the global reach of our survey this year, with strong participation from 1,304 board members and executives across a variety of industries. Our survey captures insights from C-suite executives and directors, 47% of whom represent companies based in North America, 13% in Europe, 11% in Asia, 9% in Latin America, and 8% in Australia/New Zealand, with the remaining 12% from India, Africa and the Middle East.

Our survey was conducted online in September and October of 2022 to capture perspectives on risks on the minds of executives as they peered into 2023. Each respondent was asked to rate 38 individual risk issues in terms of their relative impact 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. We also asked them to consider how each of these risks was likely to affect their organizations 10 years in the future (i.e., in 2032).

For each of the 38 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 (2023)/over the next decade (2032).
- Risks with an average score of **4.5 through 5.99** are classified as having a **“Potential Impact”** over the next 12 months (2023)/over the next decade (2032).
- Risks with an average score of **4.49 or lower** are classified as having a **“Less Significant Impact”** over the next 12 months (2023)/over the next decade (2032).

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, geographic location, and organization type). With respect to the various industries, we grouped related industry sectors into combined industry groupings to facilitate analysis, consistent with our prior years’ reports.

Table 2 lists the 38 risk issues rated by our respondents, arrayed across three categories — Macroeconomic, Strategic and Operational.

TABLE 2

List of 38 risk issues analyzed

Macroeconomic Risk Issues

- Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organization to address
- Political uncertainty surrounding the influence and continued tenure of key global leaders, shifts in the balance of global power, and political extremism may impact the stability of national and international markets to the point of significantly limiting our growth opportunities
- Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalization may affect 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 (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organization
- The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organization may require new skills that either are in short supply in the market for talent or require significant efforts to upskill and reskill our existing employees
- Geopolitical shifts, regional conflicts, and instability in governmental regimes or expansion of global terrorism may restrict the achievement of our global growth and profitability objectives
- Anticipated increases in labor costs may affect our opportunity to meet profitability targets
- The current interest rate environment may have a significant effect on the organization's capital costs and operations
- Government policies surrounding public health practices (in response to the pandemic) and stimulus to drive recovery and national resilience may significantly impact the performance of our business
- Shifts in perspectives and expectations about social issues and priorities surrounding diversity, equity and inclusion (e.g., board composition, representation in the C-suite and leadership ranks, and onboarding policies) are occurring faster than the pace at which our organization is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace
- Uncertainties from reliance on international markets for key elements of our supply chain will continue to create significant challenges for us to meet revenue/profitability goals**

** This risk is new to the 2023 survey.

Strategic Risk Issues

- Rapid speed of disruptive innovations enabled by advanced technologies (e.g., artificial intelligence, automation in all of its forms, hyper-scalable platforms, faster data transmission, quantum computing, blockchain, digital currencies and the metaverse) 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
- Rapidly expanding developments in social media and platform technology innovations may significantly impact how we do business, interact with our customers, ensure regulatory compliance and/or manage our brand
- Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered
- Growing focus on climate change and related ESG policies, regulations and expanding disclosure requirements, as well as expectations among governments, current and potential employees, and other stakeholders about "green" initiatives, supply chain transparency, reward systems, and other governance and sustainability issues, may require us to significantly alter our strategy and business model in ways that may be difficult for us to implement as timely as the actions of our competitors
- Ease of entrance of new competitors into the industry and marketplace or other significant changes in the competitive environment (such as major market concentrations due to M&A activity) may threaten our market share
- Our organization may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation
- Growth opportunities 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 from competitors that may enhance the customer experience and 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 shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organization's strategic plan and vision
- Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behavior to digital channels, may continue to impact customer demand for our core products and services
- Our organization may not be able to adapt its business model to embrace the evolving "new normal" imposed on our business by the ongoing pandemic and emerging social change

Operational Risk Issues

- Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labor, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organization's culture and business model*
- Uncertainty surrounding our organization's core supply chain including the viability of key suppliers, scarcity of supplies, energy sources, unpredictable shipping and distribution logistical issues, or lack of price stability in the supply chain ecosystem may make it difficult to deliver our products or services at acceptable margins
- Third-party risks arising from our reliance on outsourcing and strategic sourcing arrangements, ecosystem partners, IT vendor contracts, and other partnerships/joint ventures to achieve operational and go-to-market 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 and labor amid the constraints of a tightening talent/labor market may limit our ability to achieve operational targets
- Our organization may not be sufficiently prepared to manage cyber threats such as ransomware and other attacks that have the potential to significantly disrupt core operations and/or damage our brand
- Ensuring data privacy and compliance with growing identity protection expectations and regulations may require alterations demanding significant resources to restructure how we collect, store, share and use data to run our business
- Our existing operating processes, in-house talent, legacy IT infrastructure, lack of digital expertise and/or insufficient digital knowledge and proficiency in the C-suite and boardroom may result in failure to meet performance expectations related to quality, time to market, cost and innovation as well as our competitors, including those that are either "born digital" or investing heavily to leverage technology for competitive advantage
- Inability to utilize data analytics and "big data" to achieve market intelligence, gain insights on the customer experience, and increase productivity and efficiency may significantly affect our management of core operations and strategic plans
- Resistance to change in our culture may restrict our organization from making necessary adjustments to the business model and core operations on a timely basis
- Our organization's culture may not sufficiently encourage the timely identification and escalation of risk issues and market opportunities that have the potential to significantly affect our core operations and achievement of strategic objectives
- Our ability to meet expectations around protecting the health and safety of employees, customers, suppliers and the communities in which we operate may be insufficient to receive market permission to operate or encourage people to work for us or do business with us*
- Our approach to managing ongoing demands on or expectations of a significant portion of our workforce to "work remotely" or increased expectations for a transformed, collaborative hybrid work environment may negatively impact our ability to retain talent as well as the effectiveness and efficiency of how we operate our business
- The rising threat associated with catastrophic natural disasters and weather phenomena (e.g., wildfires, floods, extreme heat/cold, cyclones/hurricanes/typhoons) may create significant operational challenges that threaten our assets, employees, and our ability to deliver products and services to our customers**

* This risk was new to the 2022 survey.
** This risk is new to the 2023 survey.

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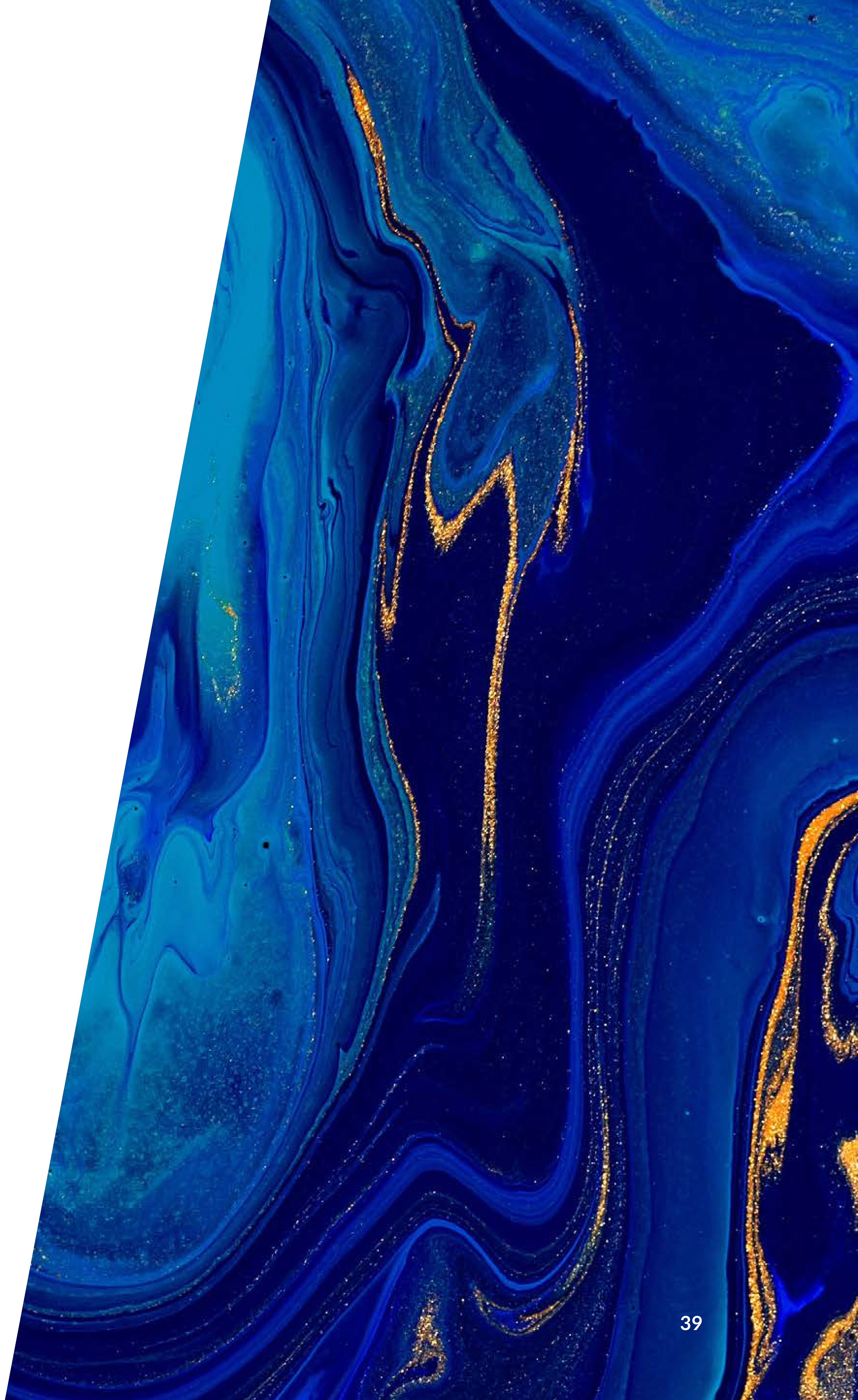

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The Enterprise Risk Management (ERM) Initiative in the Poole College of Management at NC State University provides thought leadership about ERM practices and their integration with strategy and corporate governance. Faculty in the ERM Initiative frequently 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).

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