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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

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

Contents

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 organisations 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 recognise the need to find the talent to realise fully the value proposition associated with new technologies and digital innovations and are prioritising strategies around reskilling and upskilling existing employees to get it. They also are concerned about increases in labour 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 organisations.
- **A long-term view of risks is vital in navigating the near term.** As organisations 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, emphasising 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.	Organisation’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 labour costs may affect ability to meet profitability targets	↑
4.	Resistance to change may restrict the organisation 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.	Organisation’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.	Organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis	↑

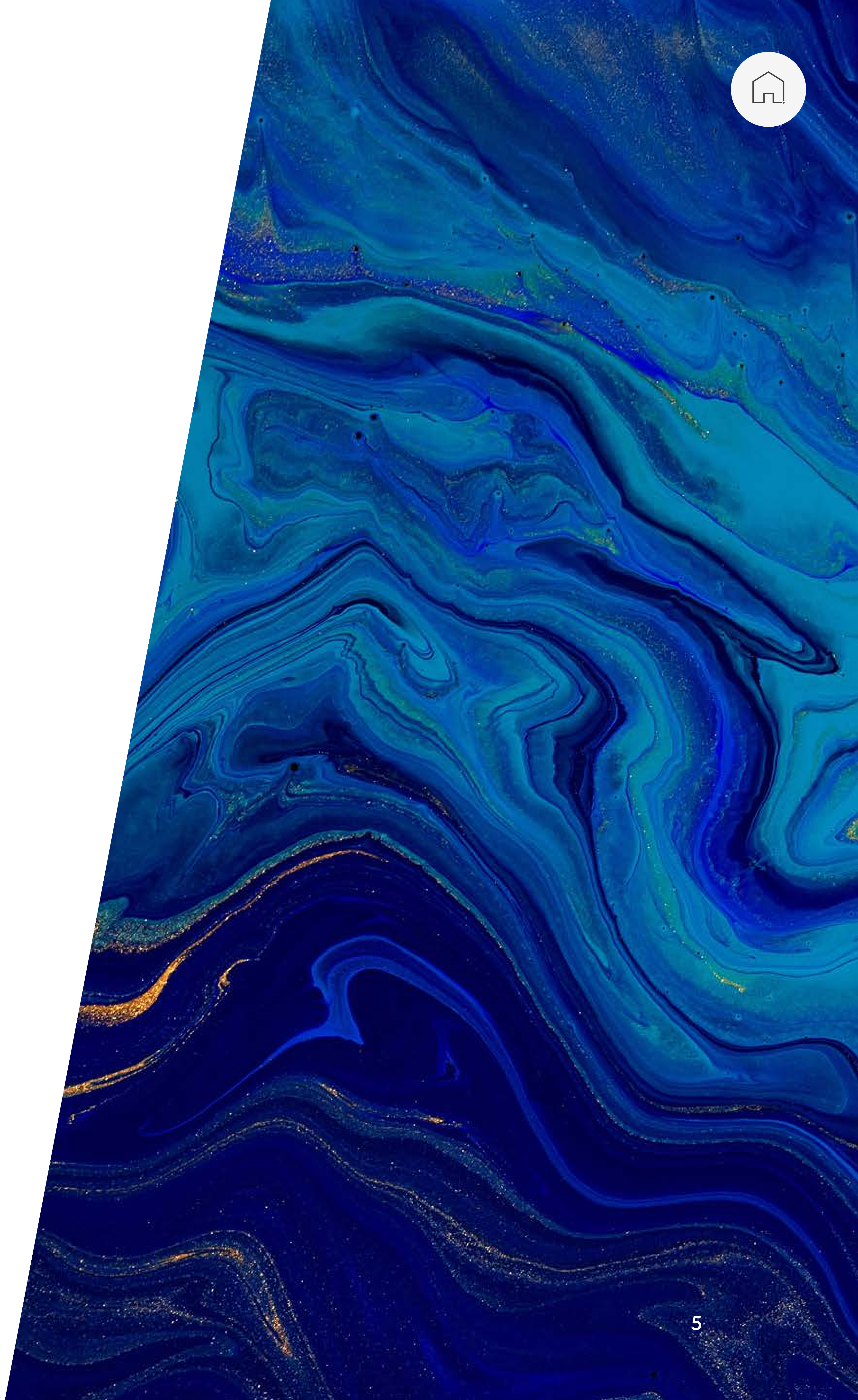
Top risks for 2032		
1.	Organisation’s succession challenges and ability to attract and retain top talent in a tightening talent market may limit ability to achieve operational targets	↑
2.	Adoption of digital technologies may require new skills in short supply, requiring significant efforts to reskill/upskill 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 organisation 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 utilise 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 labour 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 organisation'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 specialised 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 organisation'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 organisational resilience.

The need for robust, strategic approaches to anticipating and managing risks cannot be over-emphasised. 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 recognise 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 organisation'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 organisations 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 organisations 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 organisation's growth opportunities
- **Strategic risks** the organisation faces that may affect the validity of its strategy for pursuing growth opportunities
- **Operational risks** that might affect key operations of the organisation in executing its strategy

In presenting the results of our research, we begin with a brief description of our methodology and an executive summary of the high-level results. Following that overview, we highlight several calls for action that executives may want to consider as they evaluate the effectiveness of their organisation's risk governance processes in light of the key findings. Then, we discuss the overall risk concerns for 2023, including how they have changed from the two most recent surveys conducted for 2022 and 2021. We also provide a discussion of the top risk concerns for 2032 (and changes from our survey last year about 2031 top risk concerns). We follow with a review of results by size of organisation and type of executive position, as well as a breakdown by industry, geographic location and type of ownership structure (i.e., public company, privately held, or not-for-profit and governmental organisations). We conclude with a discussion of plans among organisations to improve their capabilities for managing risks and end with diagnostic questions executives and directors may find helpful to consider when evaluating risk assessment and risk management processes.

> *"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

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[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.

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 organisation over the next year. We also asked them to consider how each of these risks was likely to affect their organisations 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 organisation 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 1 lists the 38 risk issues rated by our respondents, arrayed across three categories — Macroeconomic, Strategic and Operational.

TABLE 1

List of 38 risk issues analysed

Macroeconomic Risk Issues

- Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation 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 globalisation 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 organisation
- Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation
- 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 organisation 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 labour costs may affect our opportunity to meet profitability targets
- The current interest rate environment may have a significant effect on the organisation'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 organisation 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*

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* 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 organisation'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 organisation 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 organisation
- 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 organisation's strategic plan and vision
- Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services
- Our organisation 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 labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model*
- Uncertainty surrounding our organisation'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 organisational targets or impact our brand image
- Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets
- Our organisation 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 utilise 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 organisation from making necessary adjustments to the business model and core operations on a timely basis
- Our organisation'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.

Executive summary

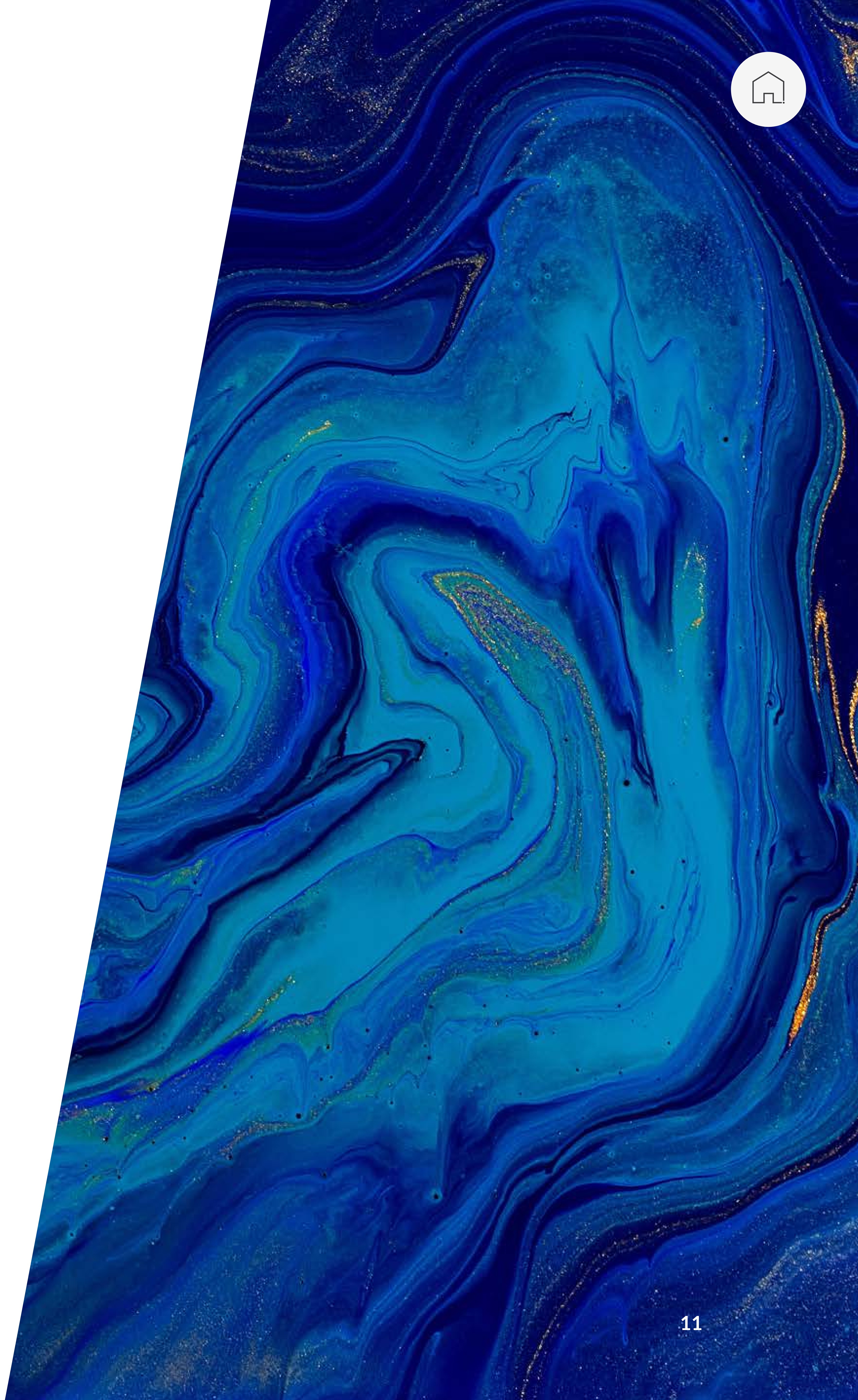
This year's survey reveals interesting perceptions of executives and directors regarding the current and long-term business environment. Key takeaways to consider include:

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 recognise and plan for longer-horizon risks may put an organisation 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 organisation'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 organisation's ability to attract, afford and retain the skills needed to embrace inevitable change — particularly changes to technology infrastructures to compete with "born digital" organisations 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 organisation's ability to



shift to meet expectations related to diversity, equity and inclusion (DEI), the spectre of cyber threats, and concerns about the inability to utilise 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 organisation's resilience in a crisis, in addition to three risks related to the organisation'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 organisational 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 organisations' 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 labour 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 labour 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 labour costs are an elevated concern.** The risk of anticipated increases in labour costs affecting the organisation'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 organisation'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 organisation 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 labour costs, employment trends and supply chain disruptions along with the spectre 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 normalise over the long term.

"Big data" is an even bigger issue long term. The risk of an inability to utilise 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 organisations’ 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 organisations’ 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 globalisation, 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 globalisation, 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 our risks 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 organisations fail to anticipate and adapt.

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

A series of calls to action

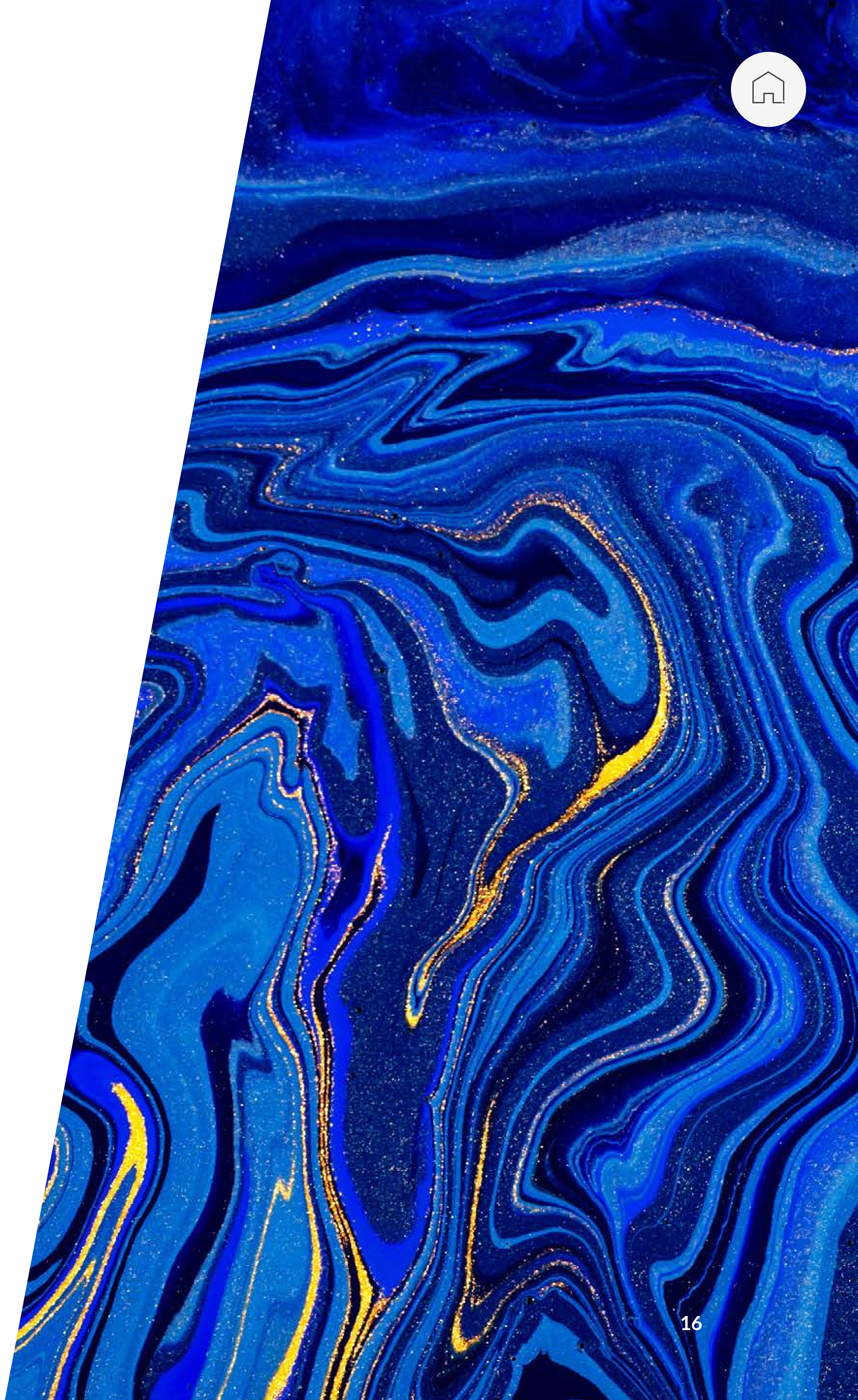
Our respondents reveal that the scope of global risks has become more expansive, and the number of different risks rated as top risk concerns is only growing in nature and type. The level of uncertainty in today's marketplace is rapidly evolving and presenting new risks that many previously thought were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

The ever-changing risk landscape and the overall perceived magnitude and severity of risks should prompt boards and senior executives to scrutinise 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, labour costs, recovering supply chains, and myriad people and culture issues, organisations 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 organisation 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 organisation's readiness for the future as they cope with near-term business realities. We have centred 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
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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 organisation's relevance and realise 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:

- **Modernise 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, digitise 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 organisation 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.
- **Capitalise 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 labour availability and costs.
- **Leverage insights and analytics from data —** Employ advanced business analytics and reporting to evolve the organisation, drive strategic decision-making, accelerate the achievement of business goals and be more competitive in the market.
- **Maximise 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.
- **Prioritise 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 organisation adopts architecture for providing standards enabling computer systems to communicate with each other, leaders must manage the exposure of the organisation'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 behavioural insights to break through internal barriers and drive improvements to the customer experience. Focus on harmonisation between automation and personalisation that meets customers' expectations of a personalised experience yet often requires an integration of competencies across the organisation 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. Organisations need to create flexibility and infuse agility into operating principles and processes to navigate continued waves of change. Prioritisation 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 ORGANISATIONAL 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 emphasised over the near term to sustain progress in transforming talent management and preserving the culture:

- **Make your talent your customer.** The organisation'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 organisation 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 organisational talent and skills needed to exit a recession in a strong position to capitalise 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 organisation's unique employee value proposition. Also, maximise 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 organisation 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 organisation's investments in upskilling employees are fully realised.
- **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 organisation 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 organisations 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 organisation and its values, reputation and brand for the long term. To that end, the following steps merit consideration:

- **Prioritise with a balanced perspective.** Give the rising cost of capital its due consideration when evaluating and prioritising 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 organisation (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.

Significance of risks relative to prior years

Before asking respondents to assess the importance of each of the 38 risks, we asked them to indicate their perceptions about the overall risk environment using a 10-point scale where 1 = “Extremely Low” and 10 = “Extremely High.”

As shown in Figure 1, the collective response indicates an increase in the overall nature of the risk environment, with an average score of 6.70 in 2023 relative to 6.21 in 2022 and 6.38 in 2021. This overarching response suggests that board members and executives perceive the risk environment for 2023 as riskier than they did when looking forward to 2022 and two years ago in anticipation of 2021.

Most notably, this is the highest level of response to this question in the 11 years we have asked respondents to provide their perceptions about the overall risk environment. This suggests organisations see the business environment for 2023 to be the riskiest ever since we began this survey 11 years ago.

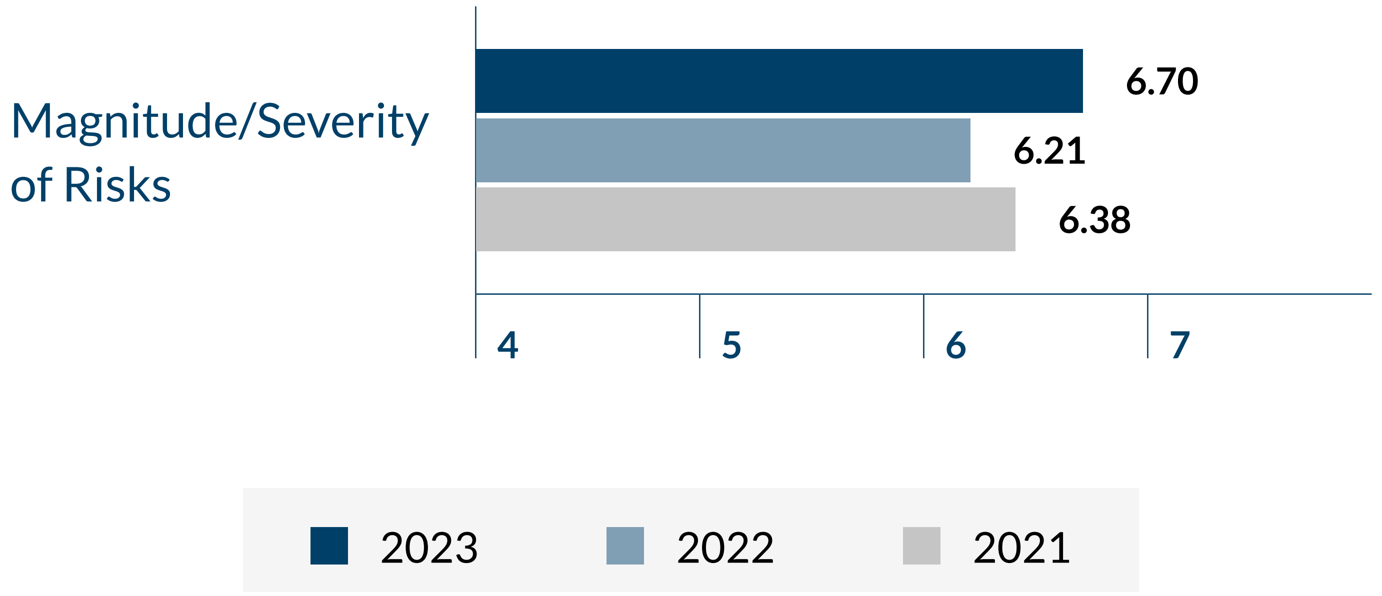
Impressions about individual risks

Given this overarching perception about the magnitude and severity of the overall risk environment, it is not surprising that for the 36 individual risks we asked about in both 2022 and 2023 (recall that two new risks were added to the survey this year), 33 of them exhibit individual risk scores that increased over their scores in the prior year, compared to only three risks for which risk scores are lower for 2023 relative to 2022.

The variation in changes in individual risk scores between 2023 and the prior year suggests that there are a number of changing market conditions making it critically important that executives focus more specifically on different types of risks given their unique characteristics and shifting nature over time.

FIGURE 1

Overall, what is your impression of the magnitude and severity of risks your organisation will be facing with respect to achieving its objectives and reaching or exceeding profitability (or funding) targets over the next 12 months?



Highlights of key differences across subsets of respondents

In addition to presenting risk insights from the 1,304 respondents, later sections of this report provide insights from the analysis of findings across different dimensions, including size of organisation, the positions of respondents in the organisation, industry, geographic regions, and organisation type (public, private, not-for-profit or government).

Differences across sizes of organisations

- When asked to assess the overall magnitude and severity of the risk environment for 2023, respondents from all sizes of organisations rate their overall concern at the “Significant Impact” level. Executives and boards from all sizes of organisations perceive the overall risk environment for 2023 to be higher than 2022 and those from all sizes of organisations, except the largest (those with revenues exceeding $10 billion), rate their overall risk concern for 2023 higher than two years earlier. When looking at the individual risks included in the top five list of risks for each of the four size categories of organisations, all but one of the top risks are rated higher for 2023 relative to 2022. Collectively, these findings indicate heightened risk concerns for 2023 relative to the past two years, which is particularly interesting given the challenges over the prior two years as organisations faced various uncertainties triggered by the pandemic.
- Several common concerns emerge when considering the top five risk issues across the different sizes of organisations. Three of the top five risks appear in all size categories of organisations: (1) succession challenges and the ability to attract and retain top talent, (2) increased labour costs that may hinder growth, and (3) economic conditions. These three risk concerns are issues affecting organisations in noticeable ways, regardless of size.
- Organisations in our two middle-sized categories (those with revenues between $100 million and $10 billion) highlight concerns about risks related to resistance to change in their organisation’s culture that may cause the organisation to fail to make needed adjustments to their business model. Large organisations are focused on uncertainties related to their core supply chain operations and their organisation’s ability to adopt digital technologies and attract the skills needed to do so successfully. In contrast, the smallest-sized organisations

These findings indicate heightened risk concerns for 2023 relative to the past two years, which is particularly interesting given the challenges over the prior two years as organisations faced various uncertainties triggered by the pandemic.

are concerned about increasing regulatory scrutiny as well as ensuring privacy and security and the related compliance challenges associated with that.

- Interestingly, organisations with revenues between $1 billion and $9.9 billion rate all of their top five risks at the “Significant Impact” level, while other sized organisations generally rate only one of their top five risks at that level. None of the top five risks for the largest organisations is rated at the “Significant Impact” level.
- Overall concerns about a riskier environment continue as business leaders look ahead to 2032. A decade out, all but one of the top five risks for each of the different size categories of organisations are rated at a higher level than they were rated last year (for 2031) and all are rated higher than they were two years ago. This suggests a heightened risk concern on the minds of executives. Most notably, respondents from the smallest organisations rate all their top five risks for 2032 as “Significant Impact” risks, with concerns about the impact of regulatory change and scrutiny noticeably high.
- All four sizes of organisations include the risk of succession and talent challenges and the risk related to disruptive innovations as top five 2032 risk concerns. Three of the four size categories of organisations also include risks related to the adoption of digital technologies with its implications to reskilling and upskilling existing employees and the risks related to resistance to change as top five risk concerns for 2032.

Differences across executive positions represented

- The overall impression across executive positions with respect to the magnitude and severity of risks in the environment is that risks are increasing for 2023 over 2022. The increase in overall concern for 2023 relative to the prior year is notable for boards, chief risk officers (CROs), chief audit executives (CAEs), and chief digital/data officers (CDOs). CEOs and CIOs/CTOs are the only executive groups whose overall outlook about the risk environment is lower for 2023 relative to 2022. The key insight is that there are varying views across different executive groups about the overall risk environment. As a generalisation, those roles that tend to seek a balance between opportunity-seeking behaviour and establishing appropriate boundaries and controls are expressing the highest levels of concern.
- There is marked contrast in perspectives about specific risk concerns across the various positions. This suggests there may be significant value in explicit discussions of overall impressions about the risk environment among key leaders, especially at the highest levels of the organisation. Boards and CEOs rate four and five, respectively, of the 38 risks at the “Significant Impact” level for 2023 while CROs only rate two of the 38 risks at that level and CFOs rate none at that level. Interestingly, boards, CEOs and CFOs rate none of the risks at the “Less Significant Impact” level, while CROs and CAEs rate 10 and nine risks at that lowest level. That begs the question,

The overall impression across executive positions with respect to the magnitude and severity of risks in the environment is that risks are increasing for 2023 from 2022.

"Who has the correct assessment of these risks?" Business leaders need to engage in robust conversations to tease out the underlying realities. Sharing diverse perspectives can lead to a better understanding of the market.

- Strikingly, chief human resources officers (CHROs) rate all 38 risks at the "Significant Impact" level for both 2023 and 2032. Clearly, these executives are feeling the pressures tied to attracting and retaining talent and all the related difficulties these labour challenges may present for their organisations over both the short and long term. Perhaps they also fear the near-term risk environment could lead to layoffs that could set back the progress that has been made in human capital management. Effective management of human capital in the near term can position the organisation to compete effectively and grow in the long term.
- Boards are most concerned about operational risks while CEOs are most concerned about strategic risk issues — a surprising distinction. A majority of executives and boards rate concerns associated with succession challenges and economic conditions as "Significant Impact" risks.
- When looking out a decade, risks causing the greatest concern among executives and boards relate to the ability of the organisation to deploy digital technologies that are available in the marketplace, concerns about the rapid speed of disruptive technologies and their impact on the business, and regulatory change and increased scrutiny. Four of the executive groups rate those three concerns as "Significant Impact" risks. Similarly, the concern about increasing labour costs is rated at that level by three of the executive positions examined.

Differences across industry groups

- Respondents across all industry groups perceive the overall magnitude and severity of risks in the environment to be higher for 2023 relative to 2022, and most perceive 2023 risks as higher than two years ago (2021).
- There is a marked contrast in perspectives across industry groups about specific risk concerns, supporting the view that industry context is important to consider. But given that certain types of organisations' business models may not fit neatly into a single industry category, reviewing differences in risk concerns across multiple industries may help tease out risks that otherwise could be overlooked.
- Respondents in the Consumer Products and Services industry group and Healthcare industry group rate 12 of 38 risks at the "Significant Impact" level, suggesting that respondents in these industry groups are the most concerned about how they are managing their risks. In contrast, respondents in the Technology, Media and Telecommunications industry group rate seven risks at that level, whereas respondents in the Manufacturing and Distribution industry group only rate three of the 38 risks at the "Significant Impact" level. Finally (and surprisingly), respondents in Financial Services and Energy and Utilities do not rate any risks at that level, possibly noting a higher level of confidence in their organisations' risk management processes.

All industry groups perceive the overall magnitude and severity of risks in the environment to be higher for 2023 relative to 2022.

- Most industry groups, other than Energy and Utilities, indicate overarching concern about economic conditions in 2023. That risk is rated as a “Significant Impact” risk by all industry groups except the one noted and Financial Services; however, Financial Services rated the economy as the third-highest risk overall. (To no surprise, interest rate risk was this industry group's top risk.) The Consumer Products and Services, Manufacturing and Distribution, and Healthcare industry groups also rate the risk related to anticipated increases in labour costs at the “Significant Impact” level. In addition, the Consumer Products and Services, Technology, Media and Telecommunications, and Healthcare industry groups rate succession planning as a “Significant Impact” risk.

- The top risk for 2023 and a decade later for the Energy and Utilities industry group relates to how rising threats associated with catastrophic natural disasters and weather phenomena may create significant operational challenges. No other industry group includes that risk in their top five risk concerns. Interestingly, while respondents in the Energy and Utilities industry group do not rate that risk at the “Significant Impact” level for the short term (2023), they do rate it at the “Significant Impact” level for the long term (2032).

- Except for Energy and Utilities, industry groups appear more concerned about overall risk conditions for 2032 relative to 2023. The Consumer Products and Services industry group identifies 15 of 38 risks for 2032 as “Significant Impact” risks, dominated primarily by operational risks. For 2032, the Technology, Media and Telecommunications industry group and the Healthcare industry group rate 11 and 10 risk issues, respectively, at the "Significant Impact" level. Operational risks dominate the top risks for Technology, Media and Telecommunications, while strategic risks dominate the 2032 top risks for Healthcare.

Differences across geographic regions

- Globally, organisations from seven out of eight geographic regions in our study agree that the overall magnitude and severity of risks are of a “Significant Impact” level in 2023. All rate the overall severity and magnitude of risks for 2023 as higher than 2022, except for respondents in the Australia/New Zealand region.

- Respondents in North America indicate the highest level of overall risk concerns for 2023, and along with respondents from India, they have the highest increase in perceptions of risks from 2022 to 2023. Surprisingly, in comparison to their overall rating, North American respondents rate only two of the 38 specific risks as “Significant Impact” risks.

- There are notable differences in views about risks around the globe, which is especially important for multinational organisations to consider. Respondents in Australia/New Zealand, India, the Middle East, and Africa rate all of their top five risks at the “Significant Impact” level while Europe and Asia rate three risks in a similar manner.

Globally, organisations from seven out of eight geographic regions in our study agree that the overall magnitude and severity of risks are of a “Significant Impact” level in 2023.

- There is variation in the nature and types of risks included in the top five risks for the eight geographic regions. Seventeen of the 38 risks appear as top five risks among the eight geographic regions and nine of the 12 macroeconomic risks are recognised as top five risks when looking across the different geographies, with Latin America reporting all top five risks as macroeconomic in nature.
- Six of eight geographic regions include concerns about succession planning and talent acquisition and retention as a top five risk. Macroeconomic risks related to economic conditions and two additional operational risks are ranked in the top five risks in at least four of the eight regions.
- Looking into 2032, strategic risks become more heightened for all regions. The two most commonly cited top five concerns, each appearing in five of the eight regions, are the risk associated with the adoption of digital technologies with its implications to the reskilling and upskilling of existing employees and the risk associated with an organisation's resistance to change.

Differences across public and non-public entities

- All types of entities — publicly traded, privately held, not-for-profit and governmental entities — sense an overall heightened magnitude and severity of risks for 2023 over the prior year, and all rate that overarching concern at the "Significant Impact" level.
- While we separately analyse publicly traded companies, privately held entities with plans for an IPO, privately held entities with no plans for an IPO, not-for-profit and government entities, we find that the top five risks across the four groups are reasonably consistent. Concerns related to succession planning and talent acquisition and retention represent the top risk concern for all groups, except private companies with no plans for an IPO, which rate the risk as their third-highest risk concern. The concern over economic conditions is in the top five list of risks for all four groups.
- Public companies are also concerned about uncertainties related to the organisation's supply chain and risks related to the adoption of digital technologies and the related need to reskill and upskill employees. Private entities hoping to soon go public rate all five of their top risks at the "Significant Impact" level, while public companies only rate one of the top five risks at that level.
- Privately held entities with plans for going public are particularly concerned about opportunities for organic growth along with government policies surrounding public health practices and stimulus to drive recovery and national resiliency. Privately held entities (both those pursuing or not pursuing an IPO) are focused also on risks associated with the current interest rate environment.
- Not-for-profit and governmental organisations rate four of their top five risks at the "Significant Impact" level. Challenges associated with escalating labour costs

Privately held entities with plans for going public are particularly concerned about opportunities for organic growth along with government policies surrounding public health practices and stimulus to drive recovery and national resiliency.

are of particular concern, with that risk being rated as their second highest, just after succession and talent development challenges. These organisations are also concerned with regulatory changes and increased regulatory scrutiny and challenges associated with ensuring privacy and security.

- Interestingly, when looking a decade ahead, there appears to be an overall heightened level of concern. Most of the top five risks in each of the four groups of entities are rated at the "Significant Impact" level for 2032.
- For 2032, all organisations are concerned about succession and talent-related challenges, with all four groups rating that risk in their top five. Except for private entities planning an IPO, all other groups are also focused on risks related to the rapid speed of disruptive technologies for 2032. Private entities planning for an IPO are mostly concerned about risks related to sustaining customer loyalty, the entrance of new competitors, economic conditions, and lack of sufficient digital knowledge and proficiencies. In contrast, not-for-profit and governmental entities looking a decade out are most concerned about regulatory changes and increased scrutiny and ensuring privacy and security.

Plans to improve risk management capabilities

In addition to asking respondents to rate each of the 38 risks for 2023 and 2032, we asked them to provide insights about plans to enhance their organisation's risk management capabilities in the coming year. Here are some key insights:

- In light of the finding that respondents note an increase in their impressions about the magnitude and severity of overall risks for 2023 relative to the prior year, they also indicate a higher likelihood of deploying more resources to risk management in 2023 relative to 2022 (and 2021). This result is not too surprising, especially considering the past two years of pandemic-related risk concerns shining the spotlight on the importance of resilience in the face of unexpected events.
- All groups of organisations based on size indicate plans to strengthen their risk management processes in 2023 as compared to 2022. And, with the exception of CIOs/CTOs, all executive positions signal a need for increased investment in risk management in the coming year.
- The Consumer Products and Services and Healthcare industry groups express the highest increases in likely investments in risk management from 2022 to 2023. This seems to parallel the overall level of risk concerns discussed earlier in our report for these two industries.

> *All groups of organisations based on size indicate plans to strengthen their risk management processes in 2023 as compared to 2022.*

The Consumer Products and Services industry group also leads in absolute terms for 2023, followed by the Financial Services industry group. The Energy and Utilities industry group is the only industry group with a status quo outlook related to investment in risk management infrastructure.

- Organisations based in North America, India and Latin America indicate the largest increase in likelihood they will invest more in risk management capabilities in 2023 relative to our 2022 results, with respondents in India reflecting the highest overall likelihood for greater investment.
- All types of entities — public companies, privately held for-profit organisations, and not-for-profit and governmental entities — indicate higher levels of likelihood that they will invest more time and energy in building out their risk management infrastructure in 2023 relative to 2022.

The ever-changing risk landscape and the overall perceived magnitude and severity of risks should prompt boards and senior executives to scrutinise closely the approaches they use to keep an anticipatory eye on emerging risks. Unfortunately, some organisations 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 organisation's corporate strategy continues to be high as expectations of key stakeholders regarding strategic relevance, risk management and risk oversight remain strong. To that end, we conclude this report by offering a number of diagnostic questions for executives and boards to consider as they evaluate their organisations' approach to managing risks. 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 organisation'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 scrutinise closely the approaches they use to keep an anticipatory eye on emerging risks.

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

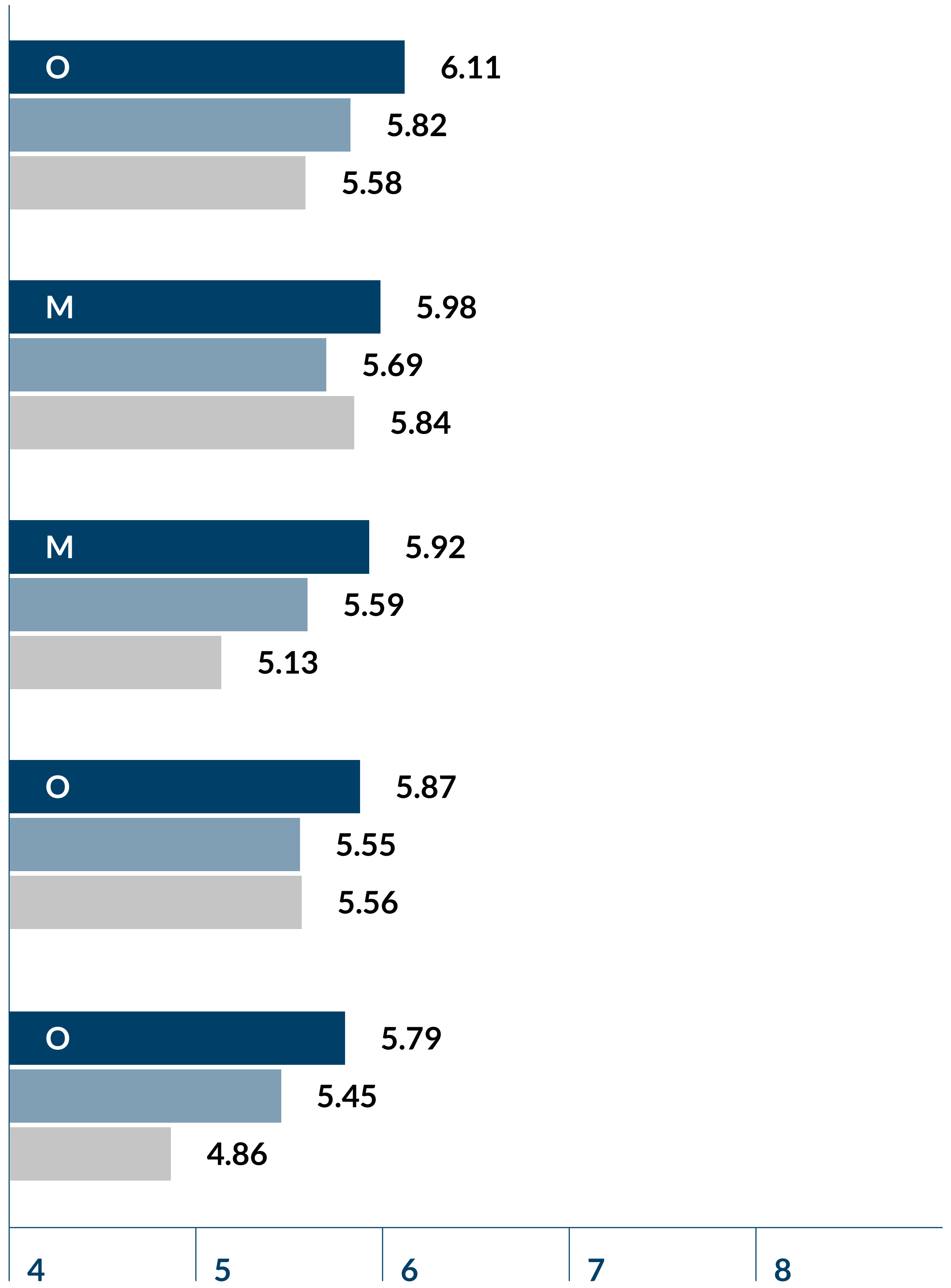
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

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

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

Uncertainty surrounding our organisation'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)

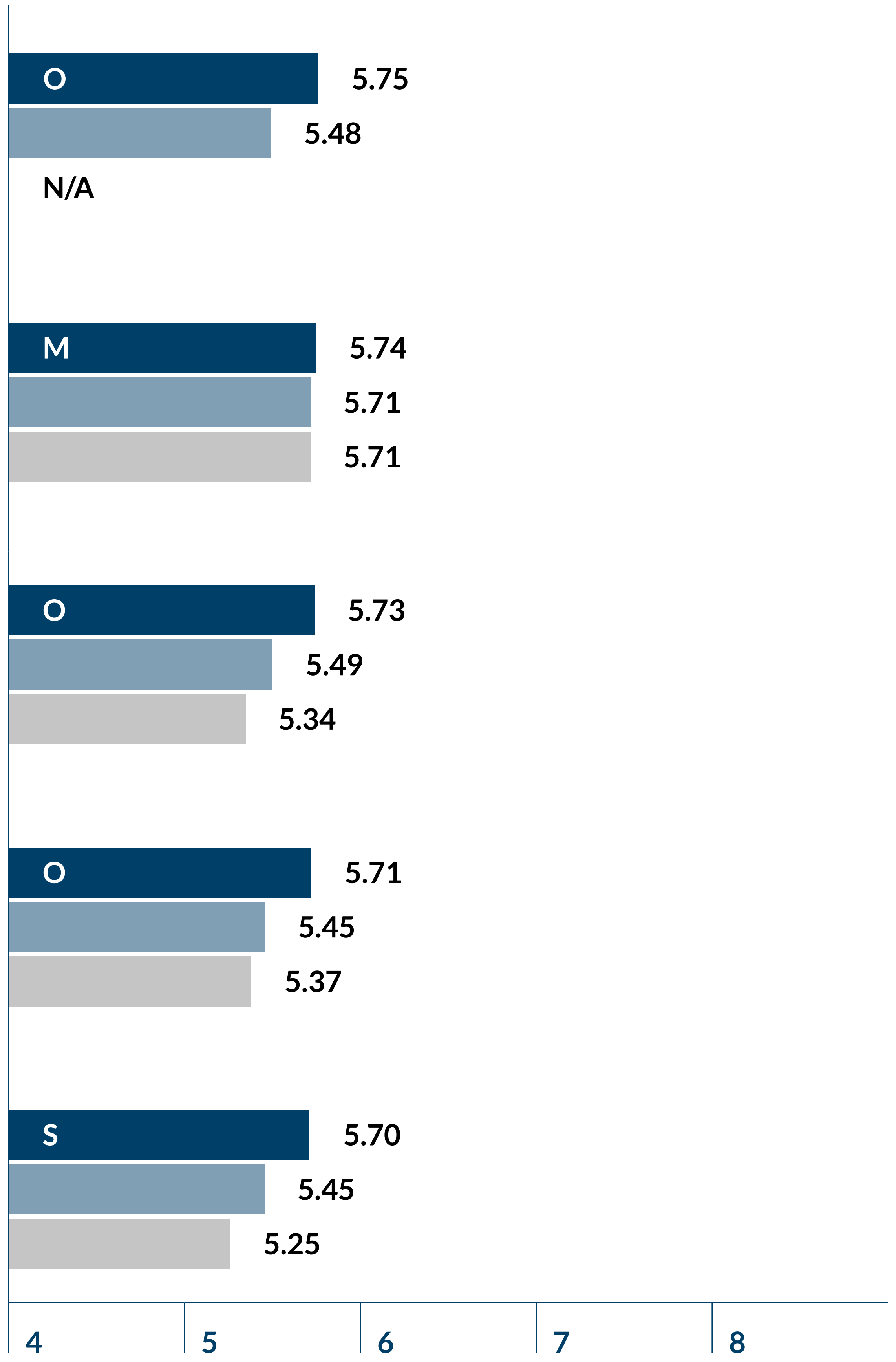
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model

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 organisation 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 organisation'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 organisation 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

It is interesting that all of the top 10 risks are rated higher in 2023 than how they were rated in 2022, reflecting an overall heightened perception of the risk landscape, with the top risk deemed to be at a "Significant Impact" level. Operational risks dominate, with six of the top 10 risks for 2023 related to that category of risk, three of the top 10 risks macroeconomic in nature and one risk strategic in nature.

Talent and culture concerns mostly dominate the operational challenges. Executives and boards reveal challenges in attracting and retaining talent as well as meeting the expectations of an evolving workforce and shifting hybrid, remote and in-person work environments to meet employee expectations and needs. Flexibility has been the norm for many organisations as they adjust to compete for different types of talent, particularly those with digital and analytic skillsets. Leaders also recognise how an ever-evolving workforce may impact the culture of the organisation. Five of the six operational risks relate to talent and culture concerns:

- Concerns about succession challenges and the ability to attract and retain talent continue to be significant with it moving to the top risk position for 2023 from the second highest-ranked risk for 2022, perhaps in response to the continued numbers of individuals exiting the workforce, leaving millions of jobs unfilled as part of the so-called great resignation. Ongoing frustrations around compensation, lack of flexible work options, mental health issues and other workplace challenges associated with the lingering pandemic-related environment continue to create challenges in attracting and retaining the right talent needed for strategic success. This is the only risk rated at the "Significant Impact" level globally for 2023.
- Resistance to change is a top concern among respondents who continue to worry that their organisation's overall culture may reflect a reluctance to make needed adjustments to the business model and core operations fast enough to address shifting marketplace conditions.
- The hybrid and remote work environments that were created at the beginning of the pandemic continue to impact the overall culture as workers are less able to interact informally on an ad hoc basis given their isolation and asynchronous work schedules. Board members and executives are concerned about how hybrid and remote working situations might negatively alter the organisation's culture and talent development as well as its ability to execute its business model.
- Notably, respondents also expressed concerns about the impact of their organisation's culture on the ability and willingness of employees across the organisation to escalate risk concerns on a timely basis to those at the top, including executives and boards. That lack of escalation may stem from a lack of awareness of how to escalate risk concerns or it may also stem from a reluctance or fear to be the bearer of bad news. Both are worth evaluating.

Resistance to change is a top concern among respondents who continue to worry that their organisation's overall culture may reflect a reluctance to make needed adjustments to the business model and core operations fast enough to address shifting marketplace conditions.

- Tight labour markets are allowing the workforce to have a louder voice as organisations rush to attract and retain needed talent. Employee workplace expectations continue to evolve, and respondents are concerned that the organisation may not be able to adjust appropriately to compete in the highly competitive talent marketplace. This continues to create challenges for organisations as they attempt to determine their long-term strategies for talent acquisition and retention.

Another operational risk is linked to uncertainties surrounding the organisation's core supply chain and instabilities in their supply chain ecosystem. The lingering challenges related to managing a complex, global supply chain in a world encumbered with uncertainties are top of mind for executives and boards. Unexpected disruptions along the value chain can arise from multiple directions.

Three macroeconomic risk concerns also appear on the list of 2023 top 10 risks:

- Respondents are focused on potential growth restrictions imposed by economic conditions, particularly in light of inflationary pressures, in markets they serve.
- The tight labour market and the war for talent are triggering concerns about heightened labour costs as organisations compete in the talent marketplace. Understandably, there are concerns about higher labour costs impacting profitability expectations.
- The rapid embrace of digital and virtual technologies and other digital platforms for product and service deliveries continues to expand in the global economy, creating concerns among many board members and executives who believe they may not have the talent and skills needed to successfully support and leverage those technologies to compete effectively in the marketplace.

Only one of the top 10 risks for 2023 (the 10th risk) is strategic in nature. This risk relates to concerns about the organisation's resilience and agility to navigate an unexpected crisis that might significantly impact its operations and reputation. Because uncertainties abound, most are realising that it is not a matter of *if* the organisation will face a crisis, but rather it is a matter of *when* a crisis might occur. Preparing today for tomorrow's crisis makes good business sense.

Majority view most top 10 risks as significant

Table 2 reveals the overall percentage of respondents who scored each of the top 10 risks as "Significant Impact" risks (6.0 or higher), as well as the percentage of respondents who rate each as a 5.0 (Medium) or as 4.0 or below (Low) for 2023. This provides another perspective on the view of the top risk issues globally, distinct from individual scores. The perception that the overall risk environment for 2023 continues to be significant (an average of 6.7 on a 10-point scale) is supported by the fact that the majority of board members and executives rate *all* of the top 10 risks at the "Significant Impact" level. This suggests that these top risks have the potential to noticeably impact most organisations in the coming year.

> *The lingering challenges related to managing a complex, global supply chain in a world encumbered with uncertainties are top of mind for executives and boards. Unexpected disruptions along the value chain can arise from multiple directions.*

TABLE 2

Top 10 risks (with percentages of responses by impact level) — 2023[2]

Risk description	Type of risk	HIGH	MEDIUM	LOW
		Significant Impact (6-10)	Potential Impact (5)	Less Significant Impact (1-4)
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	**Operational**	64%	15%	21%
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	**Macroeconomic**	61%	15%	24%
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	**Macroeconomic**	61%	15%	24%
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	**Operational**	59%	16%	25%
Uncertainty surrounding our organisation'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	**Operational**	59%	13%	28%
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model	**Operational**	58%	14%	28%

[2] The risks presented in Table 2 are in the same top 10 risk order as reported in Figure 2. That list is based on each risk's overall average score (using our 10-point scale). Table 2 merely reflects the percentage of respondents selecting a particular point (or range) on the 10-point scale.

TABLE 2

Top 10 risks (with percentages of responses by impact level) — 2023[2] (continued)

Risk description	Type of risk	HIGH	MEDIUM	LOW
		Significant Impact (6-10)	Potential Impact (5)	Less Significant Impact (1-4)
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 organisation 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	**Macroeconomic**	57%	15%	28%
Our organisation'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	**Operational**	54%	16%	30%
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	**Operational**	56%	16%	28%
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	**Strategic**	55%	15%	30%

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[2] The risks presented in Table 2 are in the same top 10 risk order as reported in Figure 2. That list is based on each risk's overall average score (using our 10-point scale). Table 2 merely reflects the percentage of respondents selecting a particular point (or range) on the 10-point scale.

Three-year comparison of risks

Each year, we provide an analysis of the overall three-year trends for the risks surveyed to provide insights about trending of individual risks. As discussed previously, to help identify differences in risk concerns across respondent type, we group all the risks based on their average scores into one of three classifications. Consistent with our prior studies, we use the following colour-coding scheme to highlight risks visually using these three categories.

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**	🟢

In Table 3, we summarise the impact assessments for each of the 38 risks for the full sample arranged by the three categories of risks we analyse: macroeconomic, strategic and operational. For each risk, the column labelled "2023 Rank" indicates that risk's relative position among the 38 risks for 2023, with rank "1" representing the risk with the highest overall impact score for 2023.

Even though a majority of respondents rated all of the top 10 risks as "Significant Impact" risks and even though respondents perceive the overall risk environment to be at its highest level in 11 years, only one of the 38 risks is, on average, at the "Significant Impact" level when combining the rankings of all respondents for each risk. This is relatively consistent with the past two years, where none in 2022 and only one in 2021 were rated at that level, even during the COVID-19 pandemic. The other 37 risk issues fall into the category of "Potential Impact" risks. None of the risks are rated at the lowest level ("Less Significant Impact") for 2023, which is consistent with last year, while only one risk was at that level two years earlier. This suggests that all of the 38 risks examined in this study represent highly relevant concerns to be considered by board members and executives.

> *"The overall risk landscape is complex, with no specific risk dominating the top risk concerns for 2023. Executives are signalling that all of the risks examined are highly relevant, demonstrating that organisations need to be scanning the horizon not only with a lens on operations within the organisation but also with an external view that considers emerging macroeconomic and strategic shifts. Risk management is not getting easier, but rather more important."*
>
> **MARK BEASLEY**
> PROFESSOR OF ENTERPRISE RISK MANAGEMENT, POOLE COLLEGE OF MANAGEMENT, NC STATE UNIVERSITY

TABLE 3

Perceived impact for 2023 relative to prior years — full sample

Macroeconomic Risk Issues	2023 Rank	2023	2022	2021
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	2	●	●	●
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	3	●	●	●
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 organisation 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	7	●	●	●
The current interest rate environment may have a significant effect on the organisation's capital costs and operations	11	●	●	●
Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation to address	20	●	●	●
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	21	●	●	🔴
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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	24	●	●	●
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	26	●	●	●

Macroeconomic Risk Issues (continued)	2023 Rank	2023	2022	2021
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	28	●	●	●
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation	29	●	●	●
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	30	●	N/A	N/A
Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalisation may affect our ability to operate effectively and efficiently in international markets	37	●	●	●

Strategic Risk Issues	2023 Rank	2023	2022	2021
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	10	●	●	●
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	16	●	●	●
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation	18	●	●	●
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	19	●	●	●
Growth opportunities through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	22	●	●	●

Strategic Risk Issues (continued)	2023 Rank	2023	2022	2021
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	25	🟡	🟡	🟡
Our organisation 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	27	🟡	🟡	🟡
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	31	🟡	🟡	🟡
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	32	🟡	🟡	🟡
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation's strategic plan and vision	33	🟡	🟡	🟡
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	34	🟡	🟡	🟢
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	36	🟡	🟡	🟡
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	38	🟡	🟡	🟡

Operational Risk Issues	2023 Rank	2023	2022	2021
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	1	🔴	🟡	🟡
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	4	🟡	🟡	🟡
Uncertainty surrounding our organisation’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	5	🟡	🟡	🟡
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation’s culture and business model	6	🟡	🟡	N/A
Our organisation’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	8	🟡	🟡	🟡
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	9	🟡	🟡	🟡
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	12	🟡	🟡	🟡
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	13	🟡	🟡	🟡

Operational Risk Issues (continued)	2023 Rank	2023	2022	2021
Inability to utilise 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	**14**	●	●	●
Our organisation 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	**15**	●	●	●
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 organisational targets or impact our brand image	**17**	●	●	●
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	**23**	●	N/A	N/A
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	**35**	●	●	●

Risks with largest increase from prior year

To highlight the most dramatic shifts in year-over-year perceptions, we also investigate which risks increased the most from 2022 to 2023. Thirty-three of the 36 risks that we surveyed in the prior year have average overall scores that are higher than the average scores in 2022. The three remaining risks decreased from 2022. In Table 4, we show the five risks that increased the most from 2022.

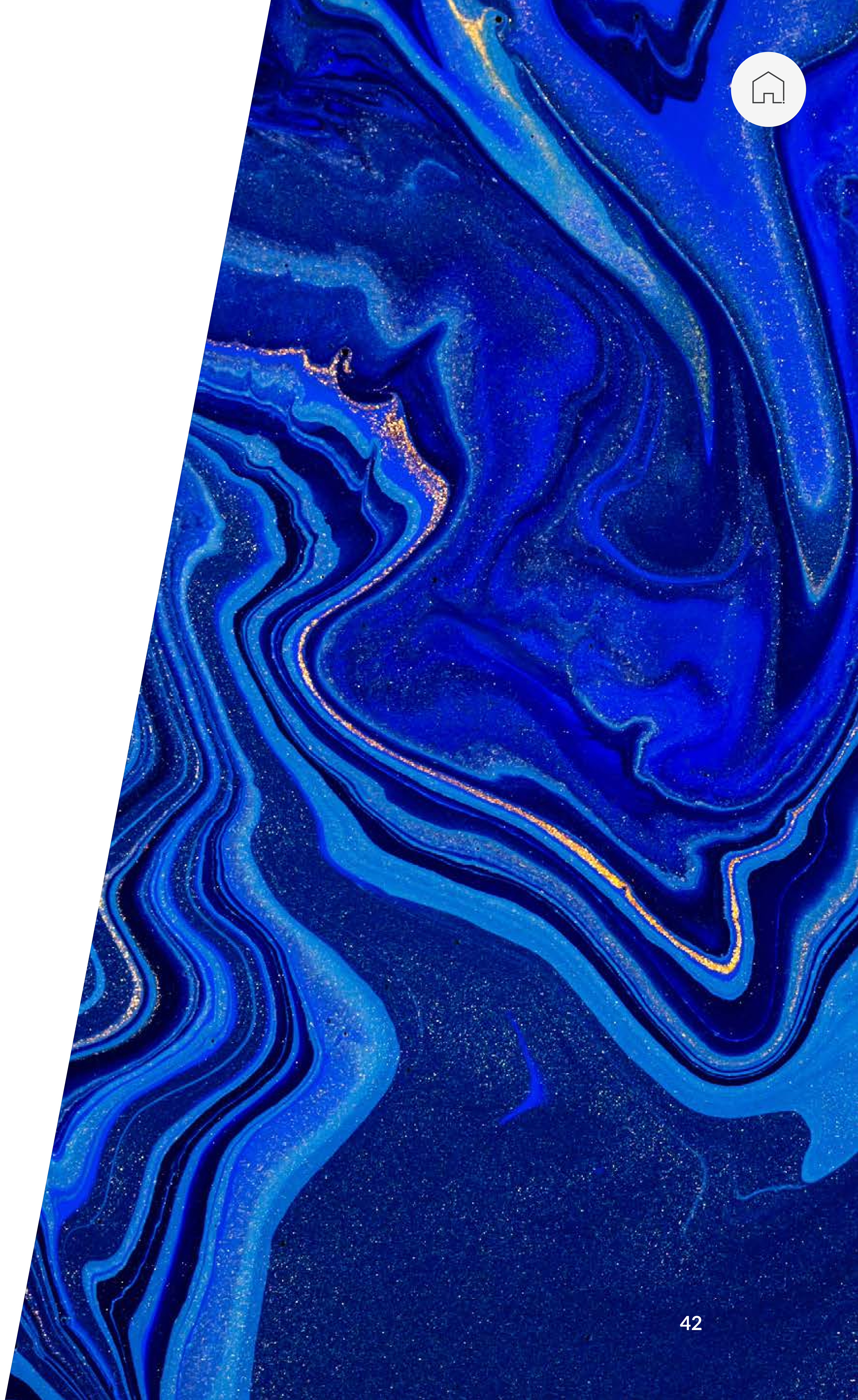
TABLE 4

The five risks with highest level of increase — 2023 vs. 2022

Risk description	Type of risk	2023 response	2022 response	Percentage change
The current interest rate environment may have a significant effect on the organisation's capital costs and operations	**Macroeconomic**	5.70	5.02	13.5%
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	**Macroeconomic**	5.41	4.77	13.4%
Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalisation may affect our ability to operate effectively and efficiently in international markets	**Macroeconomic**	5.11	4.61	10.8%
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation's strategic plan and vision	**Strategic**	5.34	4.83	10.6%
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	**Macroeconomic**	5.42	4.94	9.7%

Not surprisingly, macroeconomic risks dominate the list of risks increasing the most for 2023 over 2022. The overarching theme among these four macroeconomic risks relates to overall concerns among geopolitics, presumably influenced by the war in Ukraine, regional tensions and other geopolitical uncertainties, as many countries are facing elections and potential leadership changes. In addition, concerns related to monetary policy, interest rates, inflation and global trade policies are on the minds of respondents. Market forces continue to evolve and reshape the nature of economic activity among nations, altering long-held assumptions underpinning globalisation. The one strategic risk increasing noticeably for 2023 reflects concern about the organisation's ability to meet stakeholder expectations, including shifting expectations related to ESG issues.

> *"The threats of business disruption due to increased geopolitical events and the impact of national elections weigh heavily on the 2023 risk outlook. Understanding and addressing these threats proactively are keys to aligning a company's strategy with existing business realities."*
>
> **CAROL BEAUMIER**
> SENIOR MANAGING DIRECTOR, PROTIVITI



Risks with largest decrease from prior year

Only three risks decreased in severity in 2023 from 2022. Those risks are highlighted in Panel A of Table 5. Given all of the remaining risks increased in 2023, we also include (in Panel B) the two risks with the smallest increase.

TABLE 5

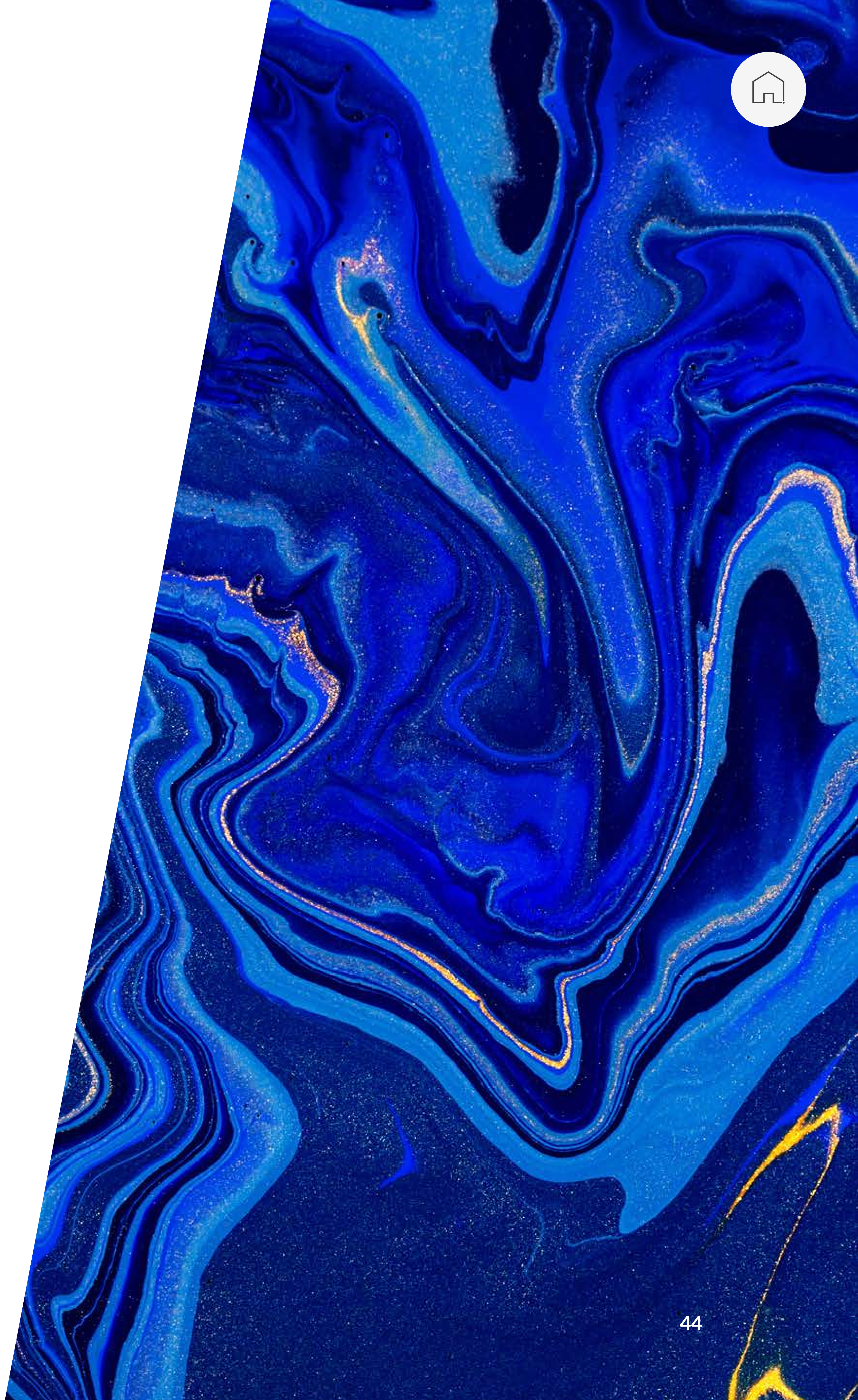
The five risks with highest level of decrease (or smallest increase) — 2023 vs. 2022

Risk description	Type of risk	2023 response	2022 response	Percentage change
Panel A: Risks with greatest decrease in 2023				
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	**Strategic**	5.10	5.77	-11.6%
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	**Macroeconomic**	5.54	5.90	-6.1%
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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	**Macroeconomic**	5.50	5.51	-0.2%
Panel B: Risks with smallest increase in 2023				
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 organisation 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	**Macroeconomic**	5.74	5.71	0.5%
Our organisation 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	**Strategic**	5.41	5.36	0.9%

Most of the risks in Table 5 reflect concerns triggered by conditions tied to the pandemic. While issues continue to linger, the fact that three of the five risks in Table 5 are linked to pandemic-related challenges suggests that respondents are beginning to view this as endemic in nature. Additionally, while concerns related to social issues and priorities tied to DEI remain important, respondents are suggesting this risk for their organisations has stabilised for the moment.

It is also important to highlight that while the risk related to the adoption of digital technologies and its required reskilling and upskilling of existing employees had only a relatively small increase in 2023 over 2022, it still ranks in the top 10 list of risks for 2023.

While concerns related to social issues and priorities tied to DEI remain important, respondents are suggesting this risk for their organisations has stabilised for the moment.



Longer-term perspective — overview of risks for 2032

In addition to obtaining respondent perspectives about risks on the horizon for 2023, we also asked them to provide insights about long-term impacts of those same risks over the next decade — into 2032. 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

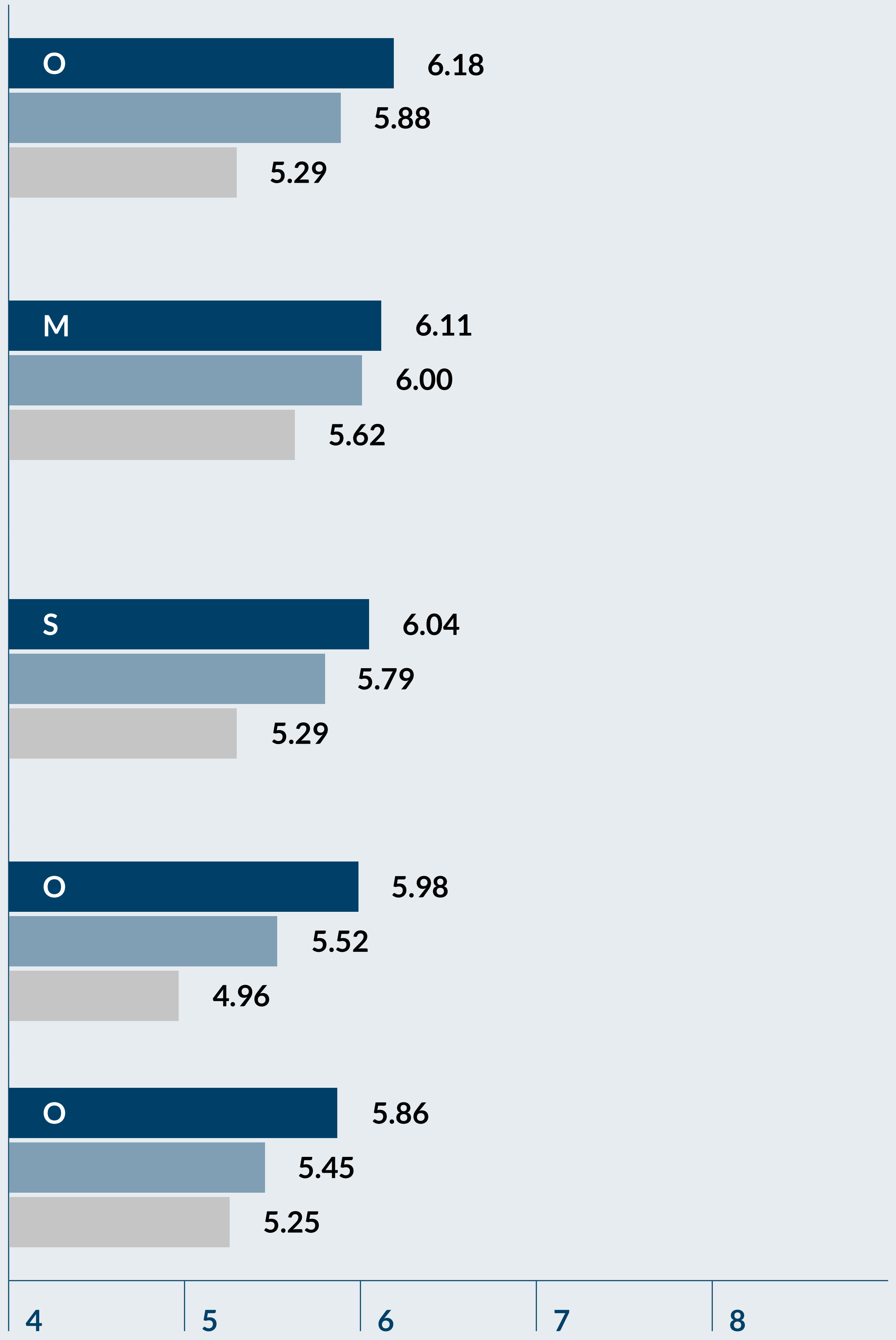
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation 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 organisation'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 organisation 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)

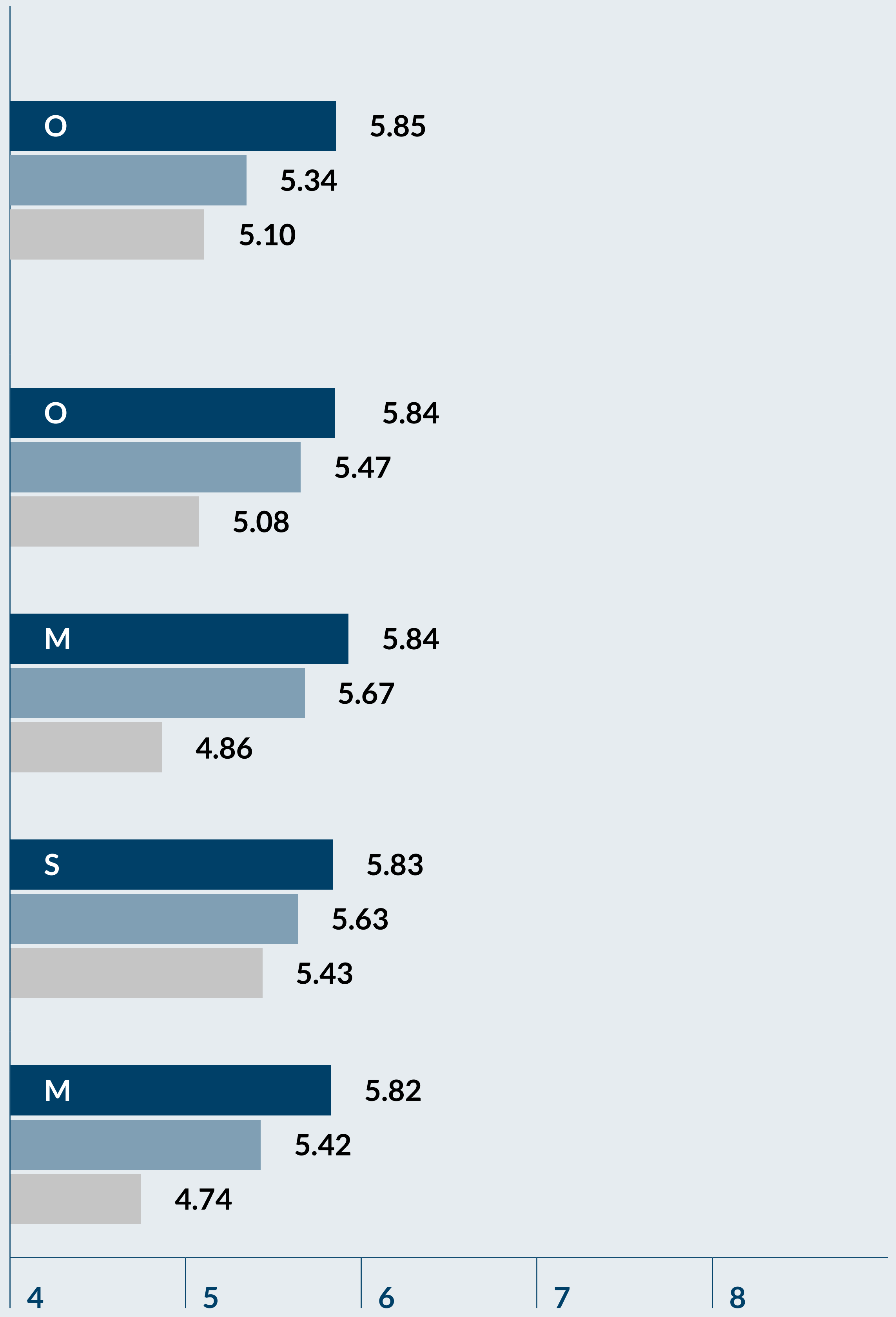
Our existing operating processes, in-house talent, legacy IT infrastructure, lack of digital expertise and/or insufficient digital knowledge and proficiency in the C-suite and boardroom may result in failure to meet performance expectations related to quality, time to market, cost and innovation as well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

Inability to utilise 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 organisation

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 labour costs may affect our opportunity to meet profitability targets



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

There is a noticeable shift in the risk landscape when comparing the top 10 short-term risks (2023) with the long-term risks (2032). Only five of the top 10 risks appear on both lists. While operational risks comprise the majority of the top 10 lists of risks for both 2023 and 2032, the nature of those operational risk concerns is different when looking out long-term. Table 6 highlights the five risks making the top 10 for 2032 that were not in the top 10 for 2023. Concerns related to technology and innovation and the organisation's ability to modify existing operations and legacy IT infrastructures sufficiently to compete with nimbler "born digital" competitors are top of mind, in addition to concerns about addressing privacy and identity protection challenges associated with greater reliance on technologies.

TABLE 6

Top five risks for 2032 *not* in top 10 list for 2023

Risk description	Type of risk	2032 rank	2032 response	2023 rank	2023 response
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	**Strategic**	3	6.04	19	5.55
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	**Operational**	5	5.86	12	5.65
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	**Operational**	6	5.85	13	5.63
Inability to utilise 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	**Operational**	7	5.84	14	5.62
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	**Strategic**	9	5.83	16	5.58

Interestingly, concerns about succession challenges and the ability to attract and retain talent is the highest-rated risk among all 38 risks we asked about for both the short-term and long-term horizons we examined. Executives and boards are clearly focused on whether their organisations will be able to attract the talent they need to remain competitive, with that concern affecting them now and perceived to be a challenge a decade from now. Human capital management is top of mind.

This is particularly interesting when considering other risks making the top 10 list for 2032 in tandem with succession and talent challenges. Several of the long-term top risk concerns relate to technology and innovation. This interaction between talent and technology is reflected by the second-highest risk for 2032 — perceived challenges associated with being able to attract the talent and skills needed to position the organisation to adopt and deploy digital technologies to remain competitive in the marketplace. That same kind of talent and technology interaction is also indicated by respondent concerns that existing legacy IT operations, lack of in-house IT talent, and limited digital thinking and expertise, particularly in the C-suite, may make it difficult for the organisation to compete in a digital marketplace. Furthermore, the respondents are concerned about having the data analytics and "big data" capabilities to gain insights about customer experiences and markets to inform decision-making as well as take advantage of operational efficiency opportunities. Clearly, talent and technology concerns are intertwined over the long term.

Executives and boards are clearly focused on whether their organisations will be able to attract the talent they need to remain competitive, with that concern affecting them now and perceived to be a challenge a decade from now.

Respondents are also focused on potential shifts in regulatory priorities and how changes in regulations might impact the way their organisations' processes are designed and how their products are produced and delivered. As executives and boards look a decade out, they are focused on the potential for new regulations to emerge as expectations around what is deemed acceptable continue to shift. Perhaps, as respondents reflect on rapidly shifting expectations over the last decade — or even recent years — related to social, privacy and environmental issues, among other changes, they are projecting ahead a similar noticeable shift as they keep a wary eye on potential scenarios and developments over the next decade.

Recall that risks with average scores of 6.0 or higher are classified as "Significant Impact" risks, while risks with average scores of 4.5 through 5.99 are classified as having a "Potential Impact." Risks with average scores below 4.5 are classified as having a "Less Significant Impact." In Figure 3, we see that three of the top 10 long-term risks are rated at the "Significant Impact" level for 2032. This is in contrast to only one of the top 10 risks for 2023 rated at that level. This difference suggests heightened uncertainty a decade out relative to short-term concerns.

Table 7 presents the percentage of respondents who rate the top 10 risks into one of these three classifications. A majority of respondents rate all of the top 10 risks at the "Significant Impact" level for 2032. This highlights a heightened long-term risk concern among respondents, given that only five of the top 10 risks for 2031 reported in last year's findings were rated by a majority of respondents as a "Significant Impact" risk a decade out. This shift suggests elevated long-term risk concerns among executives and boards relative to their long-term outlook last year. Respondents are not only more concerned about short-term risks, but that concern continues as they look a decade ahead.

TABLE 7

Top 10 risks (with percentages of responses by impact level) — 2032[3]

Risk description	Type of risk	HIGH	MEDIUM	LOW
Note: These are the responses for 2032		Significant Impact (6-10)	Potential Impact (5)	Less Significant Impact (1-4)
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	**Operational**	61%	19%	20%
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 organisation 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	**Macroeconomic**	59%	17%	24%
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	**Strategic**	57%	20%	23%
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	**Operational**	59%	19%	22%
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	**Operational**	53%	18%	29%

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[3] The risks presented in Table 7 are in the same top 10 risk order as reported in Figure 3. That list is based on each risk's overall average score (using our 10-point scale). Table 7 merely reflects the percentage of respondents selecting a particular point on the 10-point scale.

TABLE 7

Top 10 risks (with percentages of responses by impact level) — 2032[3] (continued)

Risk description	Type of risk	HIGH	MEDIUM	LOW
Note: These are the responses for 2032		Significant Impact (6-10)	Potential Impact (5)	Less Significant Impact (1-4)
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	**Operational**	53%	20%	27%
Inability to utilise 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	**Operational**	53%	21%	26%
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	**Macroeconomic**	54%	20%	26%
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	**Strategic**	55%	15%	30%
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	**Macroeconomic**	54%	19%	27%

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[3] The risks presented in Table 7 are in the same top 10 risk order as reported in Figure 3. That list is based on each risk's overall average score (using our 10-point scale). Table 7 merely reflects the percentage of respondents selecting a particular point on the 10-point scale.

Table 8 shows the risks with the biggest differences between the 2023 and 2032 scores, with all of them reflecting declines in risk scores from 2023 to 2032. Not surprisingly, the two risks with the biggest differences in short-term versus long-term views (e.g., 2023 versus 2032 average risk scores) represent pandemic-related concerns that we added to the survey in 2021. In effect, these results suggest that the respondents believe these risks shall pass with time. Interestingly, while interest rates this year are noticeably higher than last year, respondents are less concerned about interest rates a decade from now, suggesting that they may perceive that market forces contributing to the current interest rate environment will likely stabilise over time (which in turn may lead to more favourable central bank policies). That same rationale may also explain decreases in long-term concerns related to economic conditions given there are multiple factors contributing to uncertainty relative to the economy and they, too, are likely to stabilise over time. For example, respondents appear to be optimistic that current supply chain challenges may dissipate over the next decade. Time offers opportunities for market forces to find equilibrium. That said, economic uncertainty is the eighth-rated risk overall relative to the assessment of other risks over the next 10 years.

TABLE 8

Five risks with largest positive differences between 2023 and 2032

Risk description	Type of risk	2023 response	2032 response	Percentage change
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	**Strategic**	5.10	4.88	4.3%
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	**Macroeconomic**	5.54	5.34	3.6%
The current interest rate environment may have a significant effect on the organisation's capital costs and operations	**Macroeconomic**	5.70	5.55	2.6%
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	**Macroeconomic**	5.98	5.84	2.3%
Uncertainty surrounding our organisation'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	**Operational**	5.79	5.66	2.2%

Table 9 shows the average risk score for 2032 for each of the 38 risks included in our survey organised by risk category: macroeconomic, strategic and operational. Three of the risks are at the "Significant Impact" level as executives think about 2032. All other risks are at the "Potential Impact" level. None are at the "Less Significant Impact" level.

TABLE 9

Perceived impact for 2032 relative to prior years — full sample

Macroeconomic Risk Issues	2032 Rank	2032	2031	2030
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 organisation 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	2	🔴	🔴	🟡
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	8	🟡	🟡	🟡
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	10	🟡	🟡	🟡
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	25	🟡	🟡	🟡
The current interest rate environment may have a significant effect on the organisation's capital costs and operations	27	🟡	🟡	🟡
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation	29	🟡	🟡	🟡
Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation to address	30	🟡	🟡	🟡
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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	31	🟡	🟡	🟡

Macroeconomic Risk Issues (continued)	2032 Rank	2032	2031	2030
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	32	🟡	🟡	🟢
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	33	🟡	🟡	🟡
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	34	🟡	N/A	N/A
Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalisation may affect our ability to operate effectively and efficiently in international markets	36	🟡	🟡	🟢

Strategic Risk Issues	2032 Rank	2032	2031	2030
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	3	🔴	🟡	🟡
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	9	🟡	🟡	🟡
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	11	🟡	🟡	🟡
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	12	🟡	🟡	🟡

Strategic Risk Issues (continued)	2032 Rank	2032	2031	2030
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	14	🟡	🟡	🟡
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	18	🟡	🟡	🟡
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	19	🟡	🟡	🟢
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	20	🟡	🟡	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation	23	🟡	🟡	🟡
Growth opportunities through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	26	🟡	🟡	🟡
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation’s strategic plan and vision	28	🟡	🟡	🟢
Our organisation 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	35	🟡	🟡	🟢
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	38	🟡	🟡	🟡

Operational Risk Issues	2032 Rank	2032	2031	2030
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	1	🔴	🟡	🟡
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	4	🟡	🟡	🟡
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	5	🟡	🟡	🟡
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	6	🟡	🟡	🟡
Inability to utilise 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	7	🟡	🟡	🟡
Our organisation 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	13	🟡	🟡	🟡
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 organisational targets or impact our brand image	15	🟡	🟡	🟡
Our organisation’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	16	🟡	🟡	🟡

Operational Risk Issues (continued)	2032 Rank	2032	2031	2030
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	**17**	🟡	N/A	N/A
Uncertainty surrounding our organisation'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	**21**	🟡	🟡	🟢
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model	**22**	🟡	🟡	N/A
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	**24**	🟡	🟡	🟢
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	**37**	🟡	🟡	🟢

Analysis across different sizes of organisations

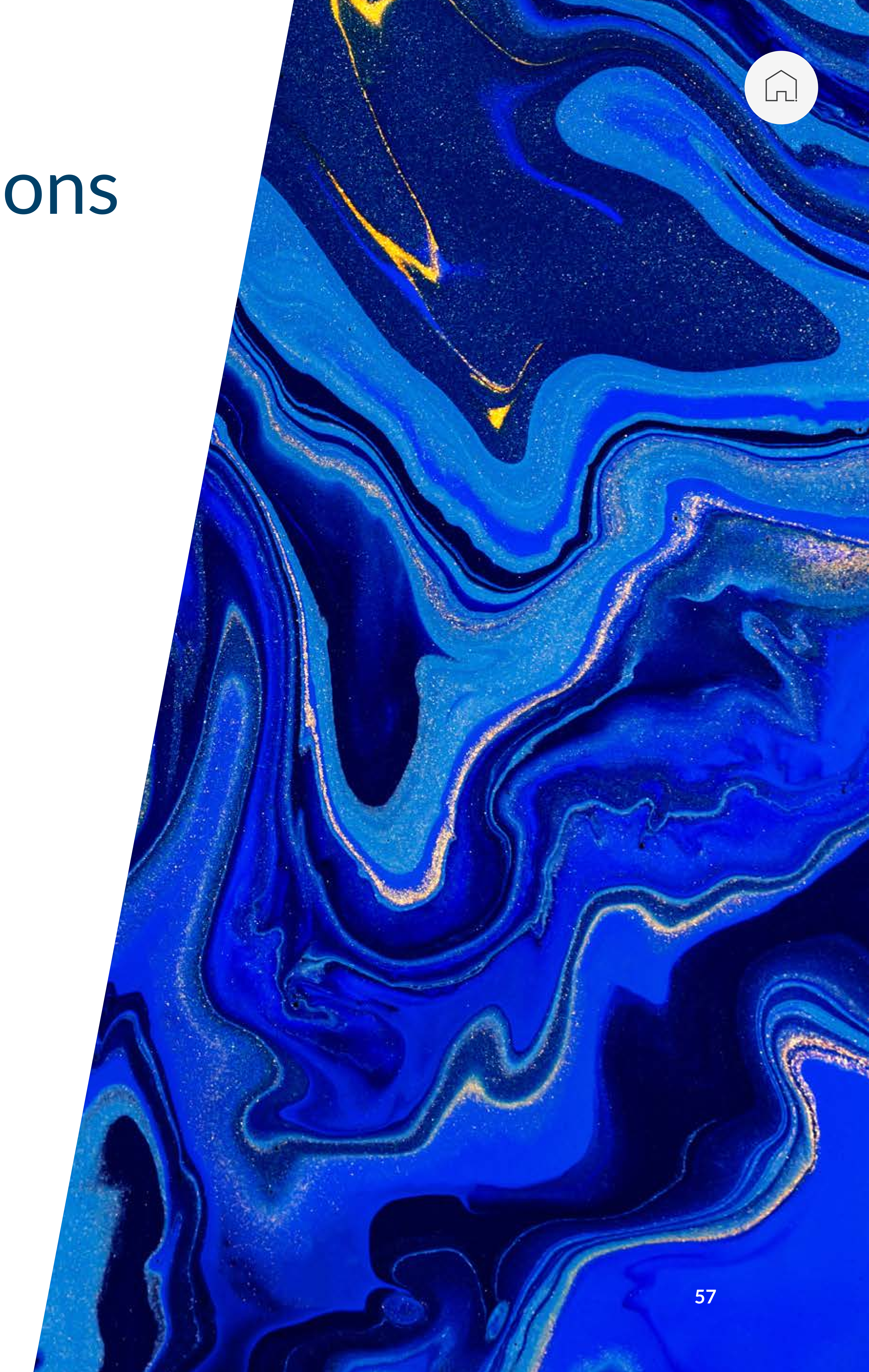
The sizes of organisations, as measured by total organisational revenue, vary across our 1,304 respondents, as shown in the accompanying table.

The mix of sizes of organisations represented by respondents is very similar to the mix of respondents in our prior years' surveys, with the exception of the smallest organisations. This year we received fewer than is typical from the smallest size group. We are not aware of any reason for this result this year as we offered our survey to the market without restrictions. About 77% of our respondents are in organisations with revenues between $100 million and $10 billion.

Most recent fiscal year revenues	Number of respondents
Revenues $10 billion or greater	246
Revenues $1 billion to $9.99 billion	711
Revenues $100 million to $999 million	295
Revenues less than $100 million	52
Total number of respondents	**1,304**

The overall outlook about risk conditions differs across sizes of organisations. We asked respondents to provide their overall impression of the magnitude and severity of risks their organisation will be facing using a 10-point scale where 1 = "Extremely Low" and 10 = "Extremely High."

Organisations of all sizes perceive an increase in the magnitude and severity of risks for their organisations in comparison to 2022 and, except for the largest organisations (those with revenues exceeding $10 billion), they see an increase above 2021. In addition, all organisations indicate that the magnitude and severity of risks will be greater than 6.0 and have a significant impact over the next 12 months. Organisations with revenues less than $10 billion all rate the coming impact above 6.5, representing an all-time high.



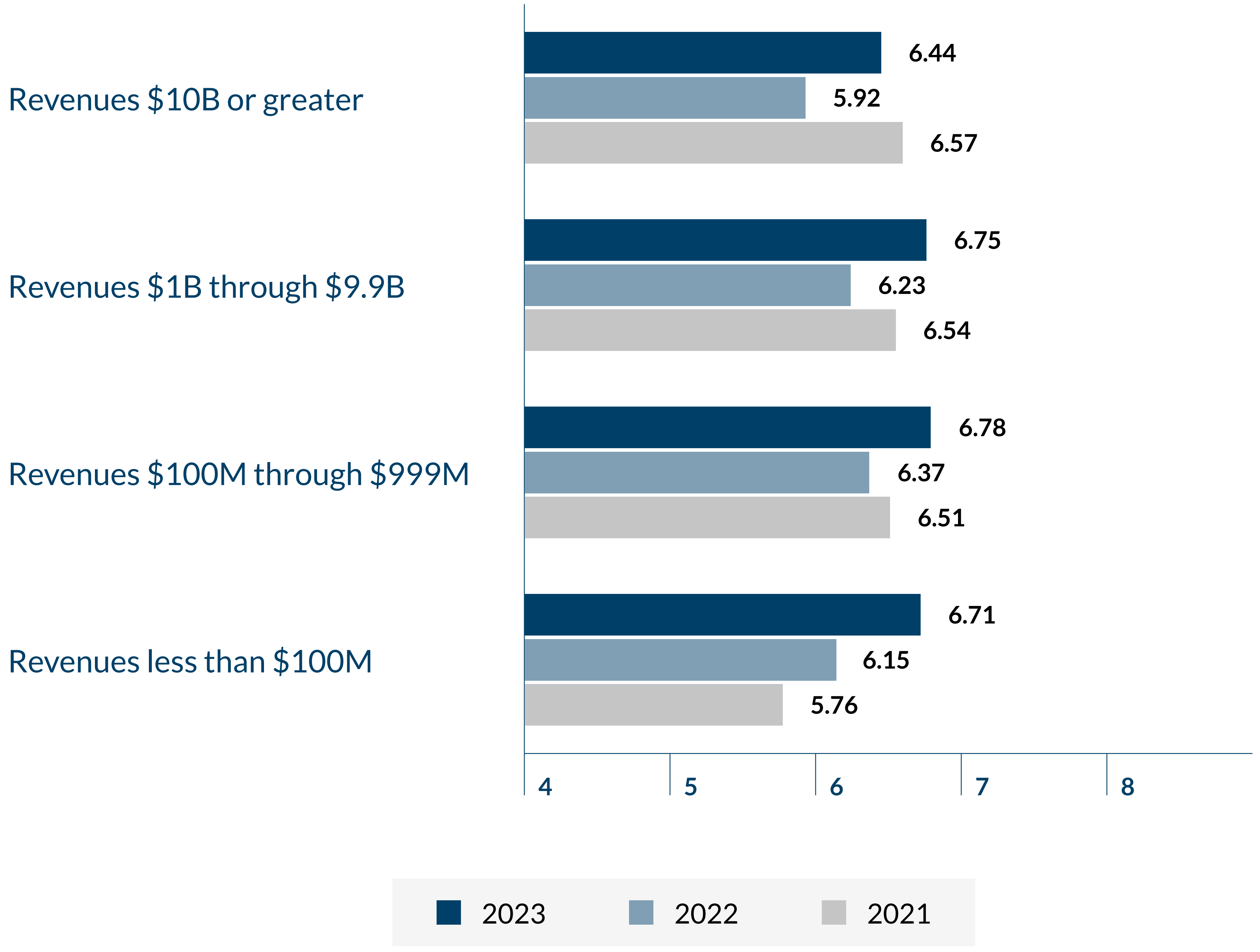
2023 risk issues

Three risks are common top five risks across all size groups: (1) Concerns about succession challenges and the ability to attract and retain top talent, (2) worries that increases in labour costs may hinder growth or impact margins, and (3) concerns that economic conditions (and inflationary pressures) in markets served may affect growth and profitability. Considering the changes in labour markets, it is not surprising that succession challenges and the ability to attract top talent is the top-rated risk for all companies with revenues greater than $100 million. For small companies with less than $100 million in revenues, economic conditions and labour cost increases are perceived to be the top two risks.

Additional top five risks are related to the significant changes brought on by technology. The largest companies with revenues greater than $10 billion cite the adoption of digital technologies (e.g., AI, automation in all its forms, natural language processing, visual recognition software, AR/VR, etc.) that require new skills and talent and necessitate the need to reskill and upskill employees. For organisations in our two middle size categories, major risk concerns include the organisation's culture and its resistance to change. Smaller companies represented by the two smaller size categories are particularly concerned about cyber threats and data privacy concerns.

FIGURE 4

Overall, what is your impression of the magnitude and severity of risks your organisation will be facing with respect to achieving its objectives and reaching or exceeding profitability (or funding) targets over the next 12 months?



2032 risk issues

All four size categories have two common risks listed in their top five risks for 2032, with one being operational and the other strategic. All four size categories of organisations are concerned that the rapid speed of disruptive innovation may outpace their ability to compete a decade from now. As well, all four size groups include the risk of succession challenges and the ability to attract and retain top talent in a tightening talent market as a top five 2032 risk concern (as is also true for the coming year, 2023). Each of the three largest organisational categories also shares concerns about the adoption of digital technologies (e.g., AI, automation in all of its forms, natural language processing, AR/VR and other technologies), with the largest firms listing this as their top risk for 2032. The three largest-sized organisational categories also share the risk that resistance to change within their culture may restrict them from making necessary adjustments to the business model and core operations on a timely basis in the face of market developments.

The largest organisations, those with revenues greater than $10 billion, are concerned about future economic conditions, while the next largest-sized organisations, those with revenues between $1 billion and $9.99 billion, are concerned about their culture and the ability to identify and escalate risk issues and market opportunities.

Smaller companies, represented by those in the two smallest categories of organisations, note that 2032 may reveal risks tied to technology issues: ensuring data privacy and compliance with identity protection, as well as the ability to manage cyber threats. The smallest-sized companies, those with revenues below $100 million, also cite the threats of regulatory change and increasing labour costs as top risks for 2032.

Figures 5-8 summarise the top-rated risks by size of organisation separately for 2023 and 2032. Only the top five risks are reported for each year and, if available, prior year risk scores are provided.

> *"Organisations of all sizes reveal heightened concern for the risk environment in the coming year. This is not at all surprising given the increasing likelihood of a recession in the near term. As well, the focus on talent acquisition and retention in a tight labour market contributes to these elevated risk concerns."*
>
> **BRUCE BRANSON**
>
> PROFESSOR OF ACCOUNTING AND ASSOCIATE DIRECTOR OF ENTERPRISE RISK MANAGEMENT INITIATIVE, POOLE COLLEGE OF MANAGEMENT, NC STATE UNIVERSITY

FIGURE 5A

Revenues $10B or greater — 2023

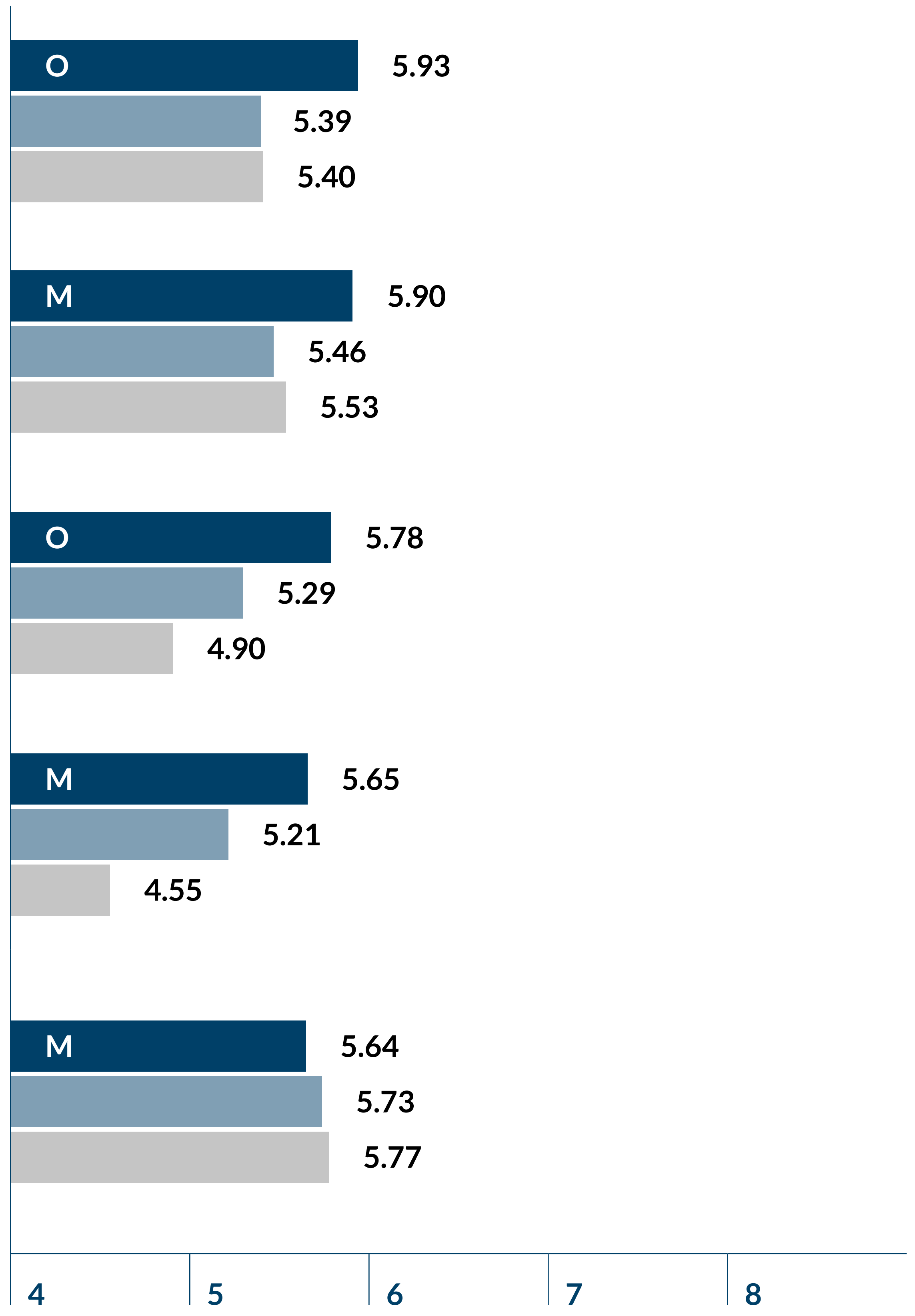
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

Uncertainty surrounding our organisation'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

Anticipated increases in labour costs may affect our opportunity to meet profitability 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 organisation 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



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

FIGURE 5B

Revenues $10B or greater — 2032

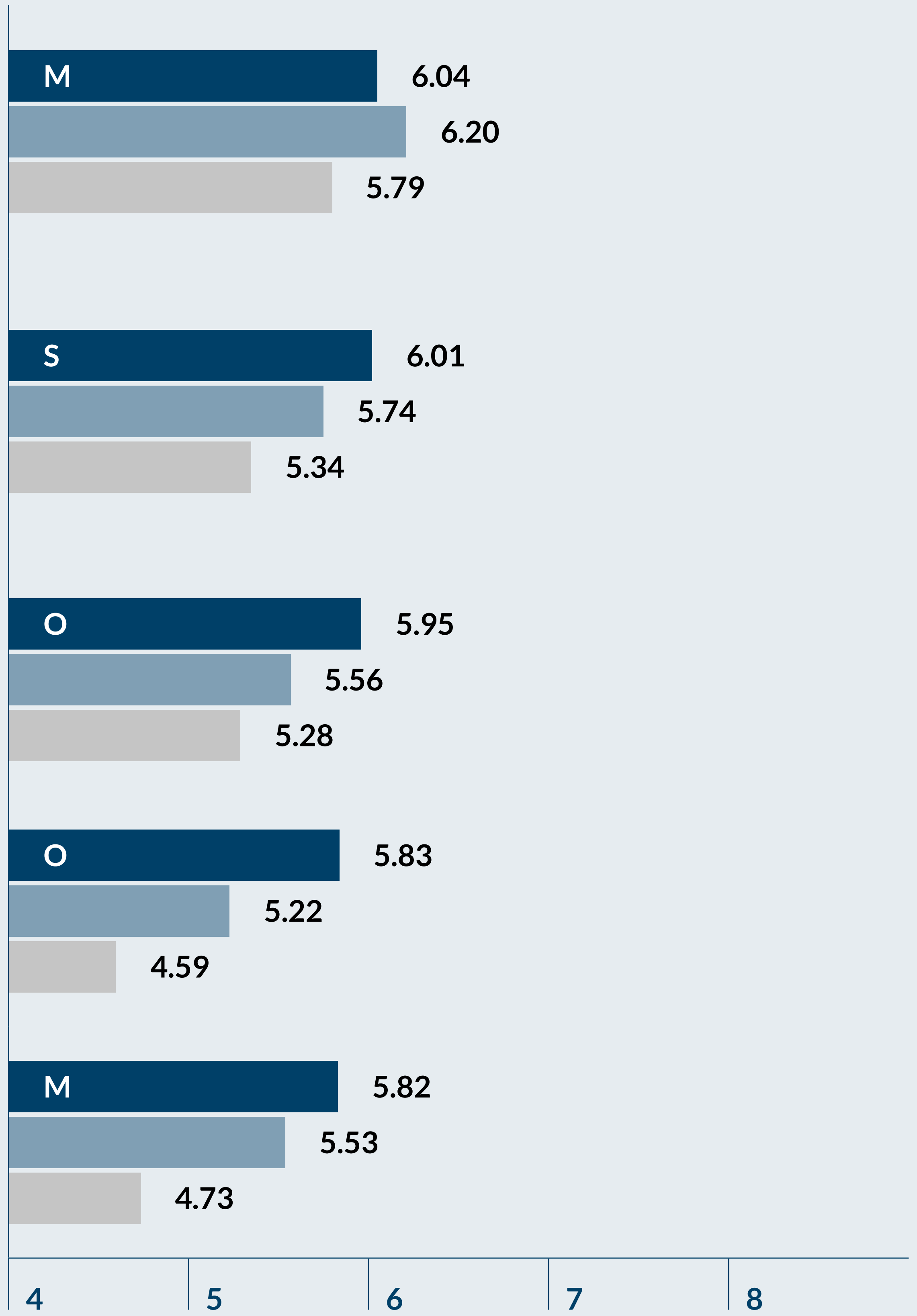
The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organisation may require new skills that either are in short supply in the market for 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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

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

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



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

FIGURE 6A

Revenues $1B - $9.99B — 2023

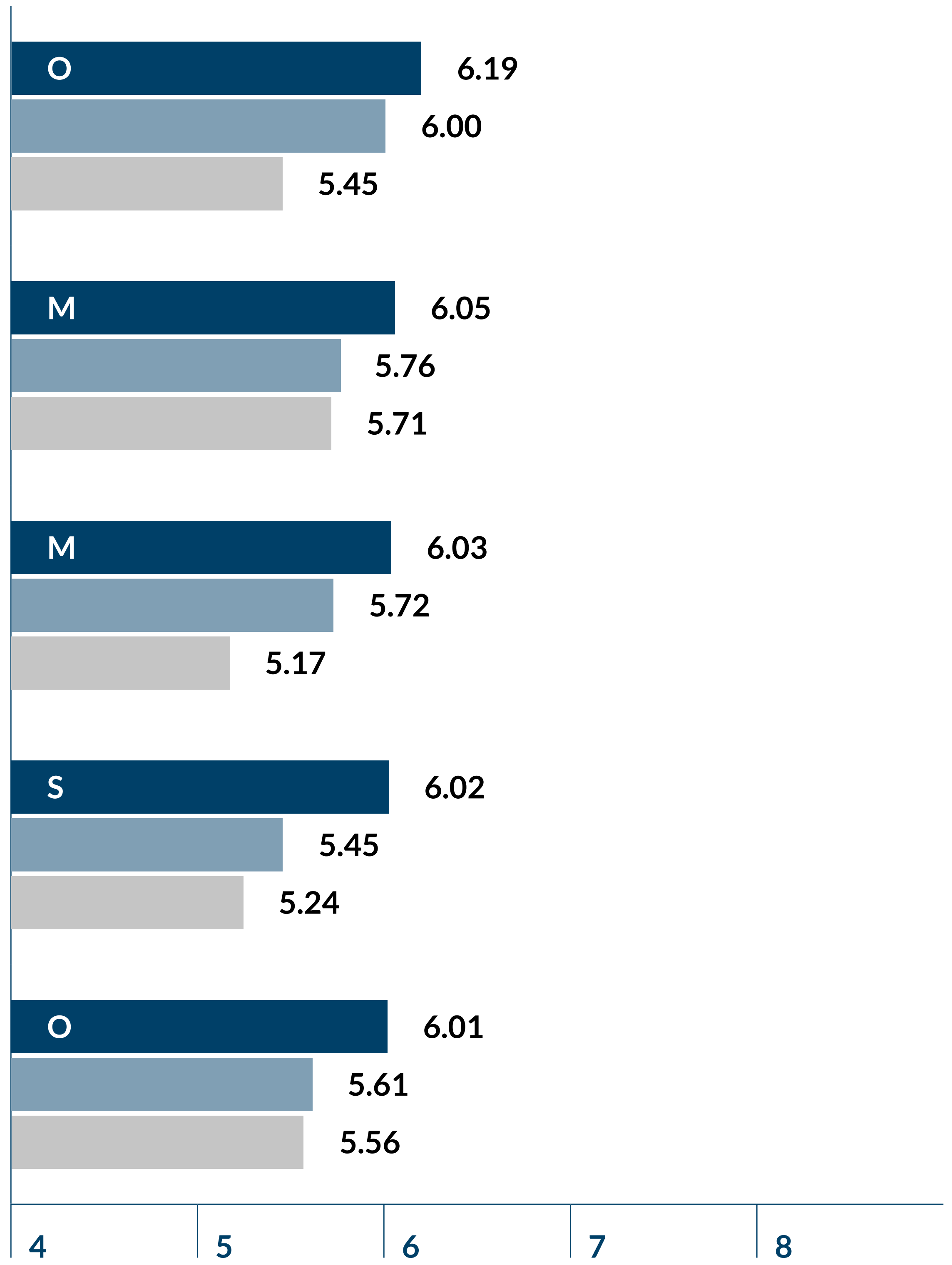
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

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

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

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



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

FIGURE 6B

Revenues $1B - $9.99B — 2032

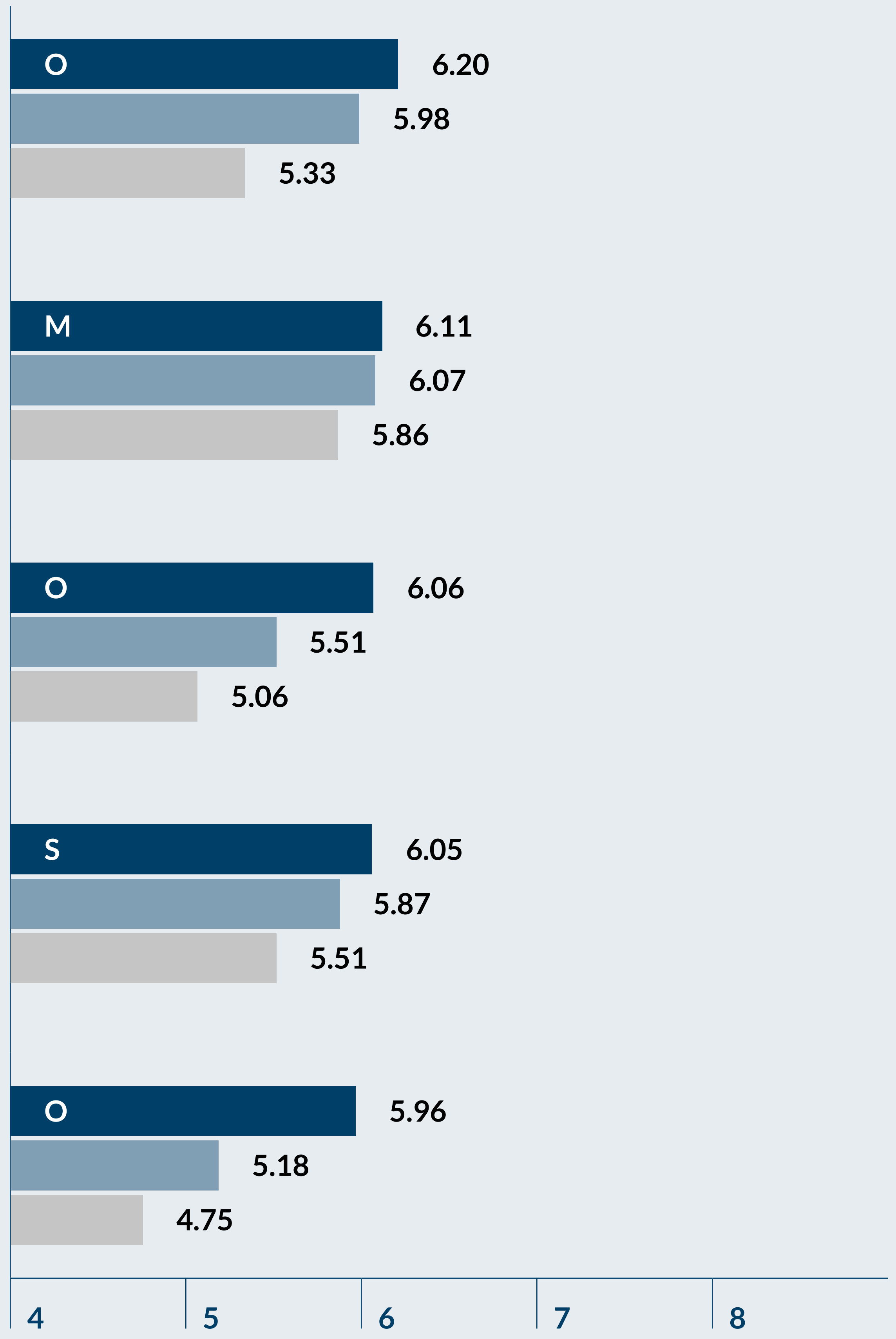
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation 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

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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

Our organisation'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



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

FIGURE 7A

Revenues $100M - $999M — 2023

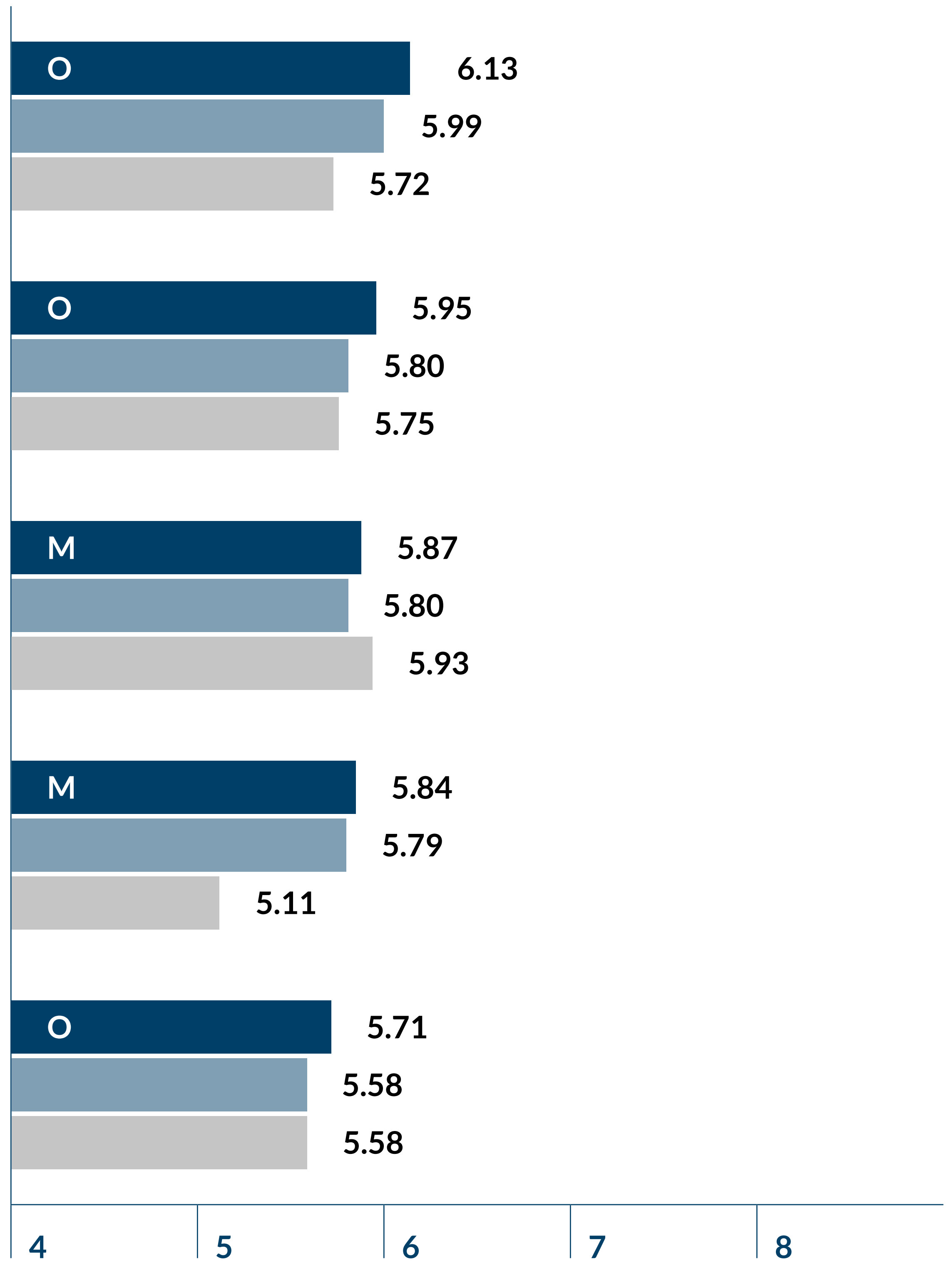
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

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

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

Our organisation 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



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

FIGURE 7B

Revenues $100M - $999M — 2032

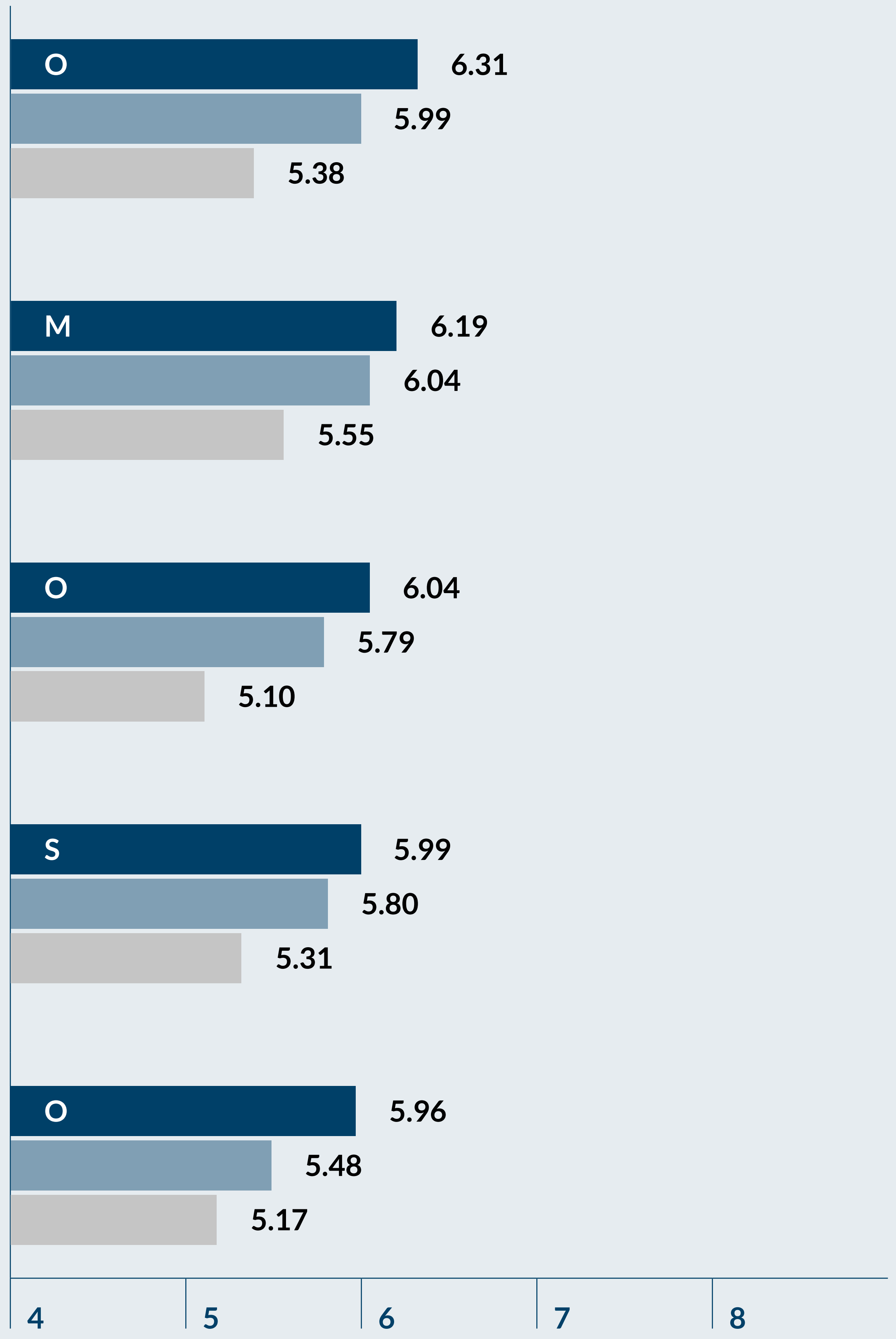
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation 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

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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

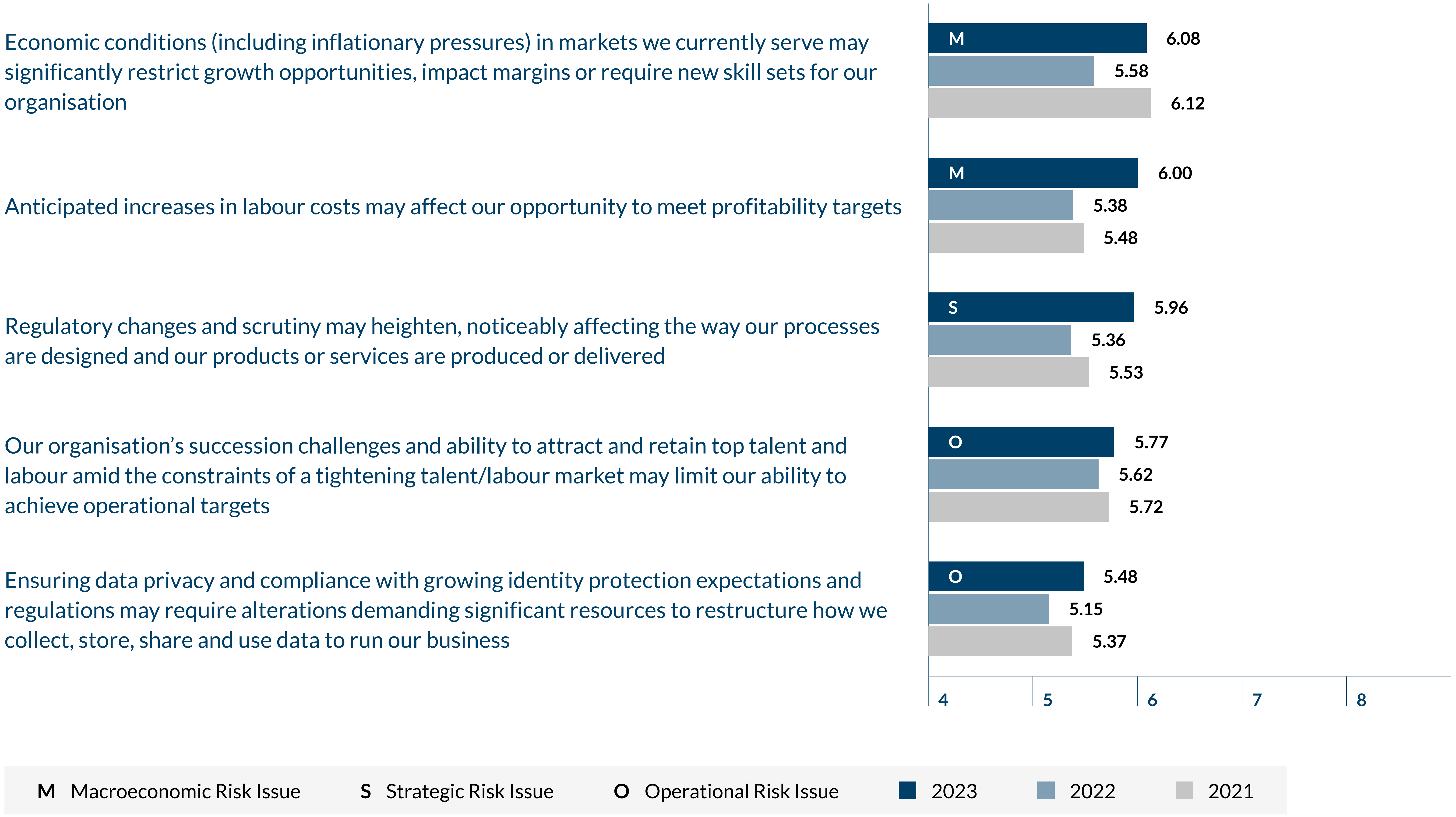
Ensuring data privacy and compliance with growing identity protection expectations and regulations may require alterations demanding significant resources to restructure how we collect, store, share and use data to run our business



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

FIGURE 8A

Revenues less than $100M — 2023



Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	M	6.08	5.58	6.12
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	M	6.00	5.38	5.48
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	S	5.96	5.36	5.53
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.77	5.62	5.72
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	O	5.48	5.15	5.37

FIGURE 8B

Revenues less than $100M — 2032

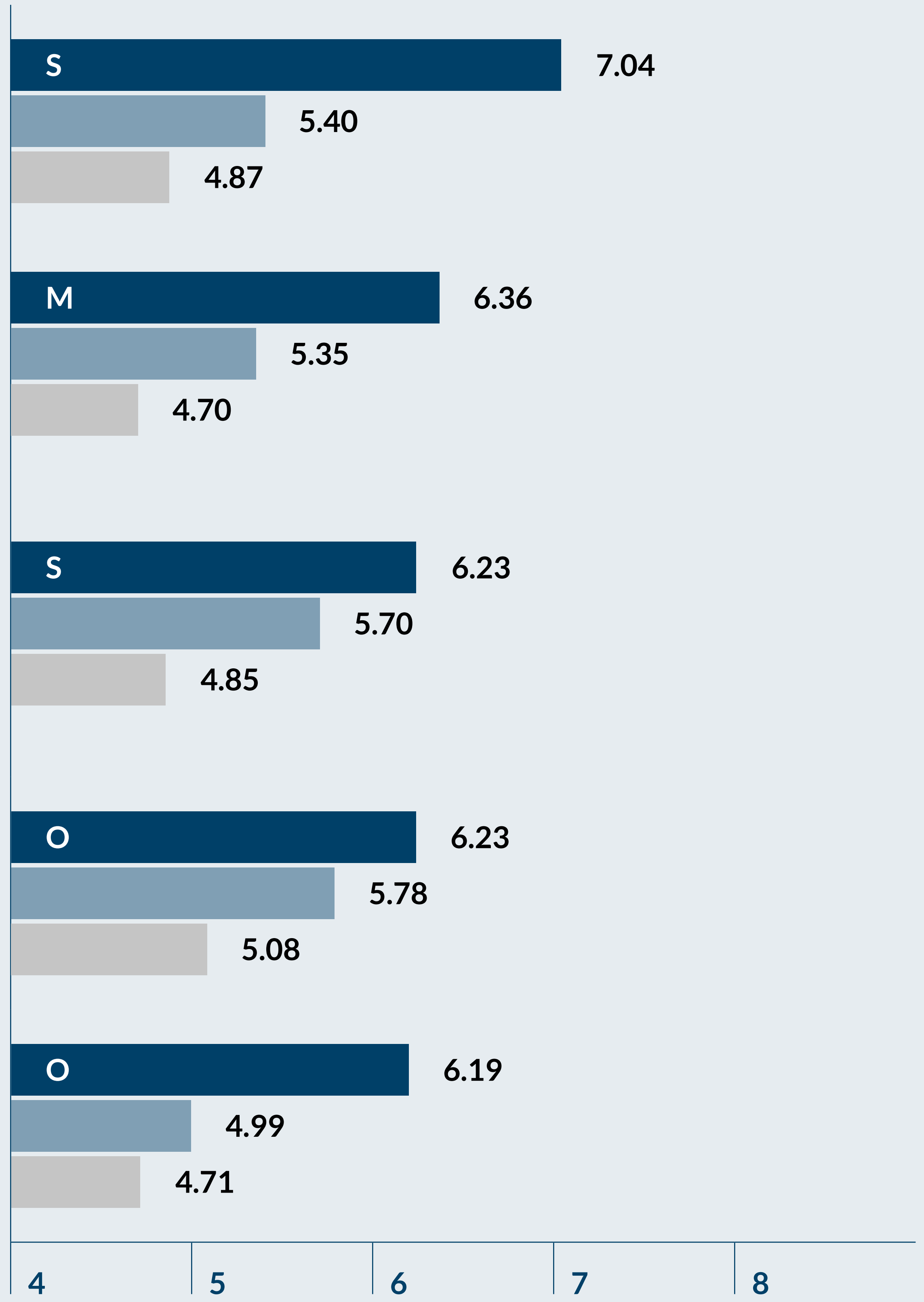
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered

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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

Our organisation 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



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

Analysis across executive positions represented

We targeted our survey to individuals currently serving on the board of directors or in senior executive positions so that we could capture board and C-suite perspectives about risks on the horizon for 2023 and 2032. We received responses from 189 members of a board of directors, and it is reasonable to expect that some C-suite executives also serve on one or more boards. An additional 138 respondents serve as CEOs for their organisations. For this year's survey, we also provide a new category for chief human resources officers (CHROs). As indicated in the accompanying table, 98 responses were received from individuals who did not fit within one of our executive categories. Their responses are included in the full sample of 1,304 but are not separately analysed.

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[4] (OCS)	36
All Other[5]	98
Total number of respondents	**1,304**

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

[5] 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.

To determine if perspectives about top risks differ across executive positions, we separately examined responses we received from board members and from nine executive positions with the greatest number of respondents (see table above). Similar to our analysis of the full sample and across the different sizes of organisations, we analyse responses about overall impressions of the magnitude and severity of risks across executive position held. The scores in Figure 9 reflect responses to the question about their overall impressions of the magnitude and severity of risks their organisation will be facing using a 10-point scale where 1 = "Extremely Low" and 10 = "Extremely High."

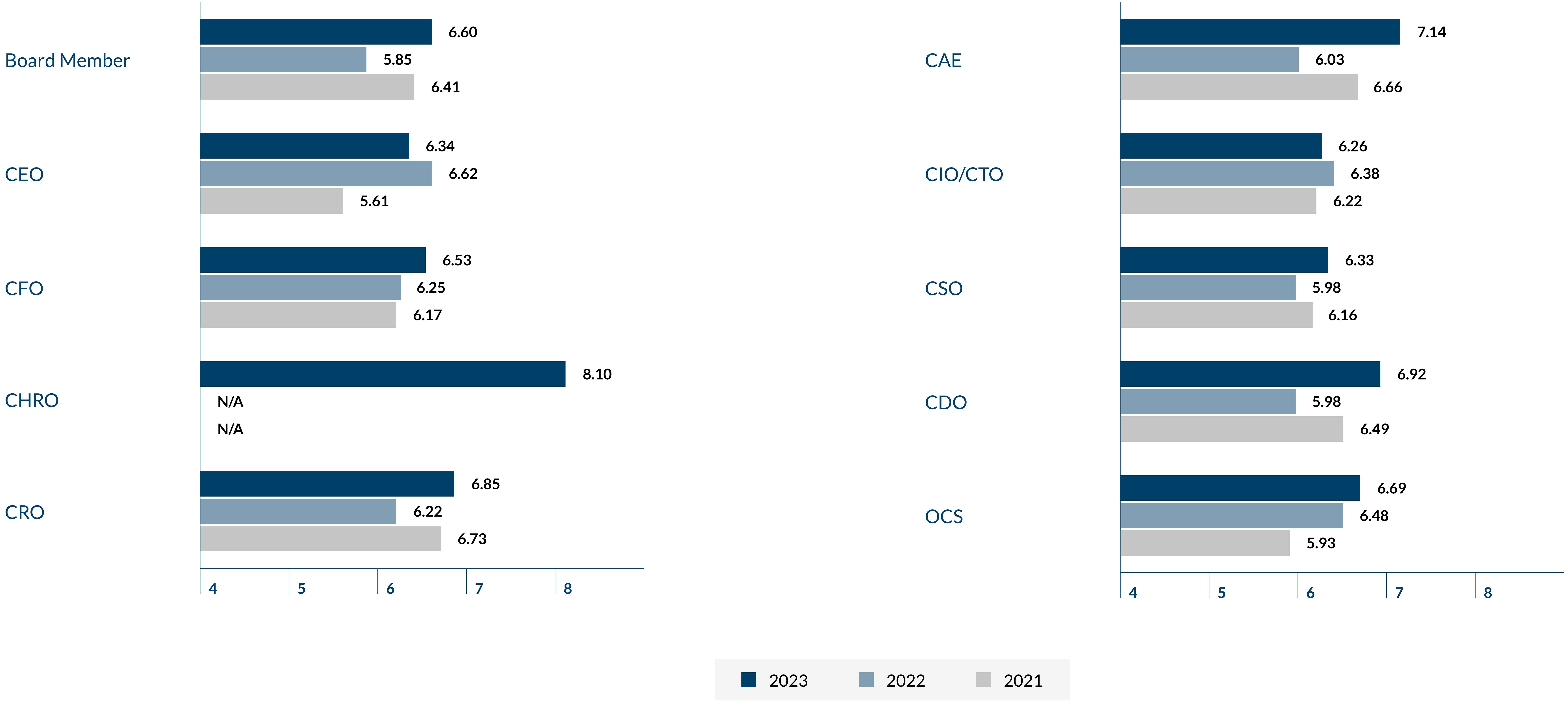
The overall impressions collectively across all executive positions with respect to the magnitude and severity of risks in the environment are that the level of risk is increasing from 2022 and all groups view it as higher than in 2021. Only CEOs and CIOs/CTOs have lowered their future impressions of 2023 risk expectations relative to 2022. Given the high ratings for succession challenges and the ability to attract and retain talent as well as the concern about rising labour costs, it is no surprise that CHROs have the highest individual score of 8.10, well above "Significant Impact." Technology-related risks also are rated highly and CDOs who have responsibility for data privacy and cybersecurity threats rate the magnitude and severity of 2023 risks at 6.92.

Board members, CFOs, CHROs, CROs, CAEs, CDOs and Other C-Suite executives all have significant concerns about 2023, with each group rating the magnitude and severity of 2023 risks greater than 6.5. Of this group, board members, CROs, CAEs and CDOs have significantly increased their 2023 risk expectations relative to 2022. For CAEs, the increase is most dramatic, jumping from 6.03 in 2022 to 7.14 in 2023. This increase in risk expectations may be the result of an overall concern about: first, how quickly business conditions have changed and are expected to change; second, the complexity of interrelated issues underpinning the risk landscape; and third, the trend toward increased expectations and transparency regarding environmental, governance and other non-financial matters.

The overall impressions collectively across all executive positions with respect to the magnitude and severity of risks in the environment are that the level of risk is increasing from 2022 and all groups view it as higher than in 2021.

FIGURE 9

Overall, what is your impression of the magnitude and severity of risks your organisation will be facing with respect to achieving its objectives and reaching or exceeding profitability (or funding) targets over the next 12 months?



There is marked contrast in perspectives across various executive positions, which suggests there may be significant value in explicitly discussing overall impressions about the risk environment among key leaders, especially at the highest level of the organisation. Enterprise risk assessments should benefit from the influx of multiple, diverse perspectives.

Consistent with prior reports, we use the colour-coding scheme below to highlight risks visually using three categories. In Table 10, we provide a summary of the impact assessments for each of the 38 risks for 2023 by category of executive using this colour-coding scheme:

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**	🟢

> *"In the digital age, taking risk means more than introducing new products and entering new markets. It also entails becoming more innovative in re-imagining processes, disrupting business models and even re-inventing the organisation itself. That is why leaders have an important role to play in strengthening and nurturing the risk culture that facilitates the initiative, creativity, agility and digital thinking so critical to success."*
>
> **JIM DELOACH**
> MANAGING DIRECTOR, PROTIVITI

TABLE 10

Role

Macroeconomic Risk Issues	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 organisation	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	🔴	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡
Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation 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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
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 organisation 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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡

Macroeconomic Risk Issues (continued)	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 organisation’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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡
Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalisation 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 organisation	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢

Strategic Risk Issues	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	🟡	🔴	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟢
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	🟡	🔴	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟢
Growth opportunities through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	🟡	🔴	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟢
Our organisation 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	🟡	🟡	🟡	🔴	🟢	🟢	🔴	🟡	🟡	🟢
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡

Strategic Risk Issues (continued)	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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟢
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	🟡	🟡	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟡
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation's strategic plan and vision	🟡	🟡	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟢
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢

Operational Risk Issues	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	🔴	🔴	🟡	🔴	🔴	🔴	🔴	🟡	🟡	🟡
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	🔴	🟡	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model	🔴	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our organisation 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	🟡	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡
Our organisation'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	🟡	🟡	🟡	🔴	🟡	🟡	🔴	🟡	🟡	🟡

Operational Risk Issues (continued)	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Uncertainty surrounding our organisation'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 organisational targets or impact our brand image	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
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 utilise 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	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡

Operational Risk Issues (continued)	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	🟡	🟡	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟡
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 risk issues

For 2023, concern about specific risk issues is varied, as reflected by their ratings of the 38 risks at the highest impact level (red circles). For 2023, board members, CAEs and CIOs/CTOs are most concerned about operational issues. CIOs/CTOs report four "Significant Impact" risks, board members report three and CAEs two. CEOs are most concerned about strategic risks and report four "Significant Impact" risks. CIOs/CTOs also identify two strategic risks as high impact. For macroeconomic risks, CAEs rate two risks at the "Significant Impact" level, while board members and Other C-Suite executives identify one macroeconomic risk as elevated. CHROs are the most concerned group, ranking all risks as "Significant Impact."

In relation to our prior year results, while most executives rated fewer specific risk issues as "Significant Impact," board members increased their "Significant Impact" risks from zero in 2022 to four in 2023. Other groups report more significant declines in these risks after the heightened concern over the two previous years. CEOs report five risks at the highest impact level, which is down from 13 in 2022, and "Significant Impact" risks for CIOs/CTOs decreased from 17 to six. Somewhat surprisingly, CROs report 10 risks as "Less Significant Impact," an increase from six in 2022. CIOs/CTOs also report eight risks as "Less Significant Impact." Clearly, there are noticeable differences in views about 2023 risk conditions across executive type. The disparity of perspectives among executives and directors begs for more engagement in conversations with one another to forge a robust view of the organisation's risk profile.

2032 risk issues

For 2032, overall risk perceptions exhibit significant variation relative to 2023. CHROs, CROs, CAEs and Other C-Suite executives have the most concern about the future, rating eight or more risks at the "Significant Impact" level. These groups also view 2032 as riskier than 2023, rating significantly more 2032 risks at the "Significant Impact" level compared with 2023. CROs and CAEs, consistent with their views for 2023, also have the most varied risk outlooks, with the most risks rated at the "Least Significant Impact" level than other groups. Again, CHROs have the highest risk concern and rate all risks at the "Significant Impact" level. Five executive position groups rate either no or one risk at the "Significant Impact" level. (Four of the 10 position groups did so for 2023.) The biggest change in long-term outlook is with CEOs, who rate only one risk as "Significant Impact" for 2032 after rating 10 risks at that level in our previous survey looking out to 2031.

> *The disparity of perspectives among executives and directors begs for more engagement in conversations with one another to forge a robust view of the organisation's risk profile.*

Table 11 shows the average risk scores for both 2023 and 2032 together to highlight differences in views about individual risks across different executive positions.

TABLE 11

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 organisation	2023	🟡	🟡	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Anticipated increases in labour 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 organisation 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 organisation 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 organisation'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 organisation 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 globalisation 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 organisation	2023	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟢	🟡	🟡	🟡	🟡

Strategic Risk Issues	Year	Board	CEO	CFO	CHRO	CRO	CAE	CIO/ CTO	CSO	CDO	Other C-Suite
Our organisation 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 organisation	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 organisation 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 organisation'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 organisation's strategic plan and vision	2023	🟡	🟡	🟡	🔴	🟢	🟡	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour 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 organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	2023	🔴	🔴	🟡	🔴	🔴	🔴	🔴	🟡	🟡	🟡
	2032	🔴	🔴	🟡	🔴	🔴	🔴	🟡	🟡	🟡	🔴
Resistance to change in our culture may restrict our organisation 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 labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation’s culture and business model	2023	🔴	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🟡
Our organisation 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 organisation’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 organisation'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 organisational 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 utilise 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	🟡	🟡	🟡	🔴	🟢	🟢	🟡	🟡	🟡	🟡

Figures 10-19 on the following pages highlight the top five risks identified by board members and each executive position (collectively referred to as "leadership positions"). For 2023, nine of the 10 leadership positions (except for CHROs) rank concerns about succession challenges and the ability to attract and retain top talent in their top five risks for 2023. CHROs did rate this risk at the "Significant Impact" level, with an average score of 7.02. This risk was also rated in the top five by eight of the leadership positions for 2032. Overall, the results reflect how different roles offer varying perspectives when assessing risks in disparate environments and over longer versus shorter time horizons. Four of the top five risks for board members and CFOs for 2023 are operational while CEOs rate four strategic risks as their top priorities. Looking out to 2032, board members view three of the top five risks as operational and two as strategic, while CEOs appear to have a more strategic focus with three of the top five risks in this category.

Interestingly, five of the leadership position groups — board members, CEOs, CHROs, CAEs and CIOs/CTOs — rate at least four of their individual top five risks at the "Significant Impact" level for 2023. They have much greater concern about a number of specific risks compared with other executives, especially CFOs, CSOs and CDOs, who do not rate any of their top five risks at the "Significant Impact" level.

Board members expressed the largest increase in the 2032 risk landscape as compared to their 2031 risk perceptions in last year's study. These leaders rated four of the 2032 risks as "Significant Impact," whereas in the previous year they did not rank any of the risks at this level. On the other hand, CEOs expressed the largest decrease in "Significant Impact" top five risks — this group rated all of their 2031 top five risks at the highest level but had one such risk for 2032.

The results prominently reflect the importance of bringing varying perspectives to the ERM process. Each executive is needed to best identify and assess risks in disparate environments and over longer versus shorter time horizons. It is of paramount importance that both the board and the management team engage in dialogue regarding the critical enterprise risks, given the different perspectives each brings to the table and the potential for a lack of consensus. Without clarity of focus, the executive team may not be aligned both internally and with the board on what the top risks are. Worse, they may not be appropriately addressing the most important risks facing the organisation, thereby leaving the organisation potentially vulnerable to certain risk events.

It is of paramount importance that both the board and the management team engage in dialogue regarding the critical enterprise risks, given the different perspectives each brings to the table and the potential for a lack of consensus.

FIGURE 10A

Board Members — 2023

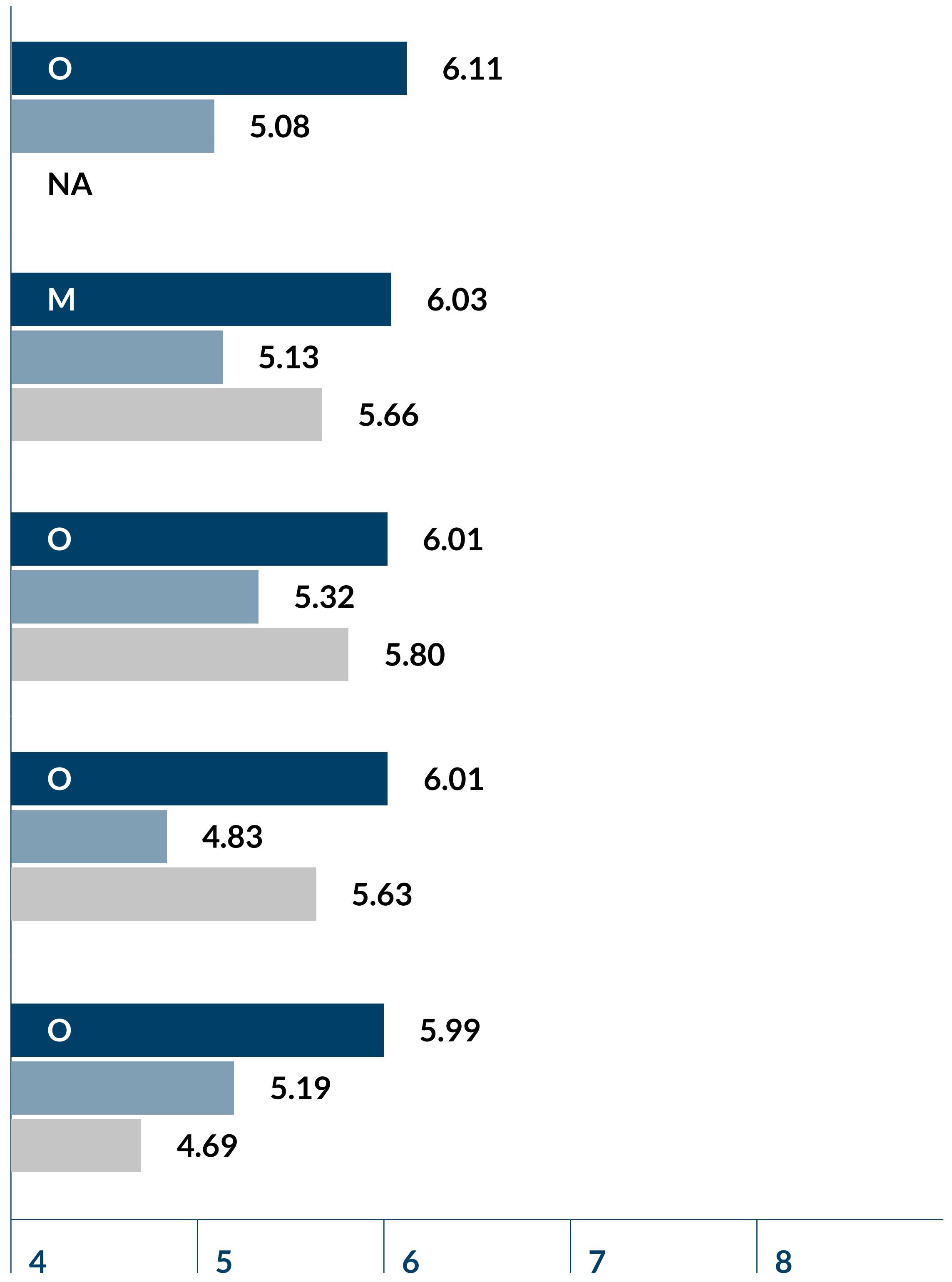
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model

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

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

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

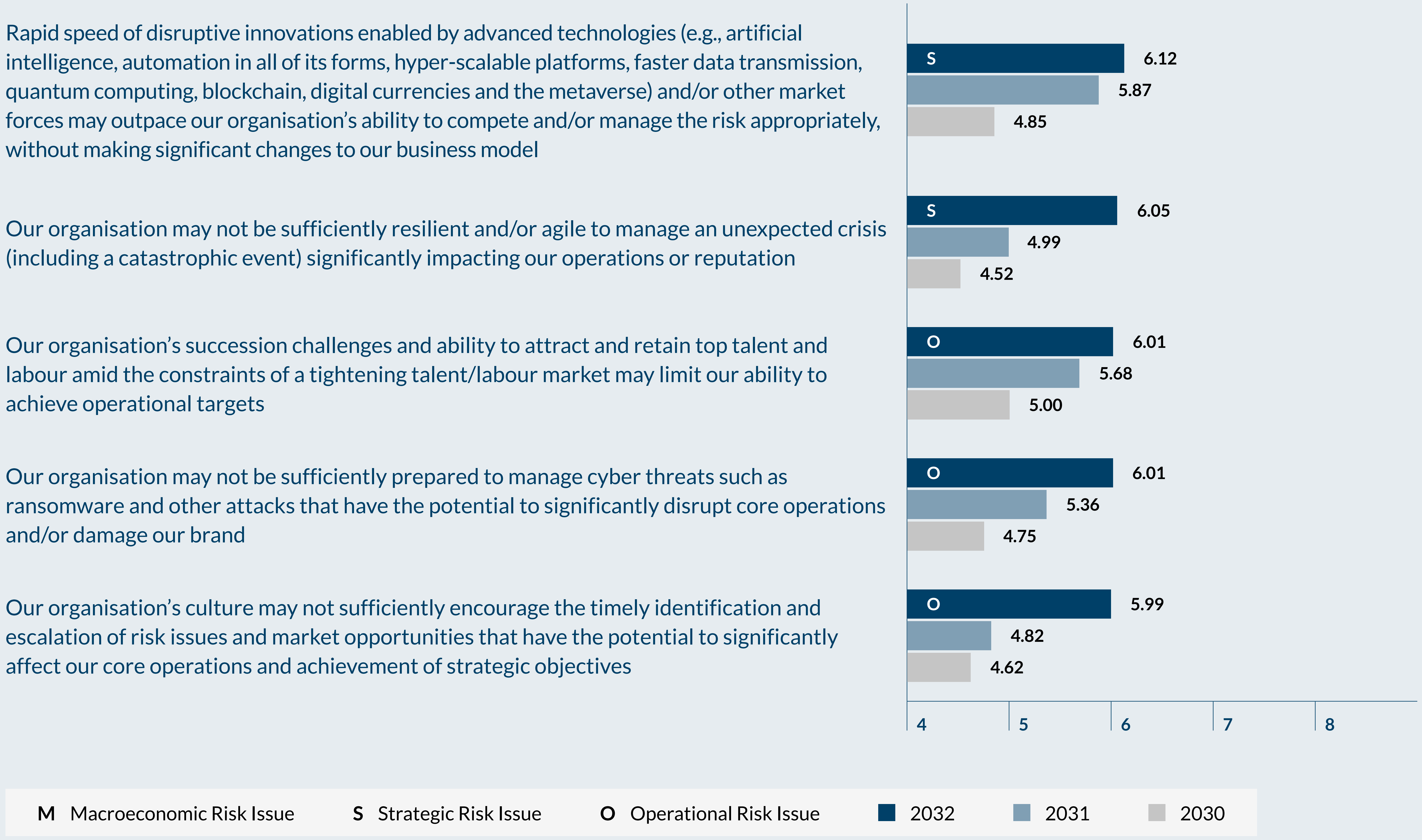
Uncertainty surrounding our organisation's core supply chain including the viability of key suppliers, scarcity of supplies, energy sources, unpredictable shipping and distribution logistical issues, or lack of price stability in the supply chain ecosystem may make it difficult to deliver our products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



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

FIGURE 10B

Board Members — 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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model	S	6.12	5.87	4.85
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	S	6.05	4.99	4.52
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	6.01	5.68	5.00
Our organisation 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	O	6.01	5.36	4.75
Our organisation’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	O	5.99	4.82	4.62

FIGURE 11A

CEOs — 2023

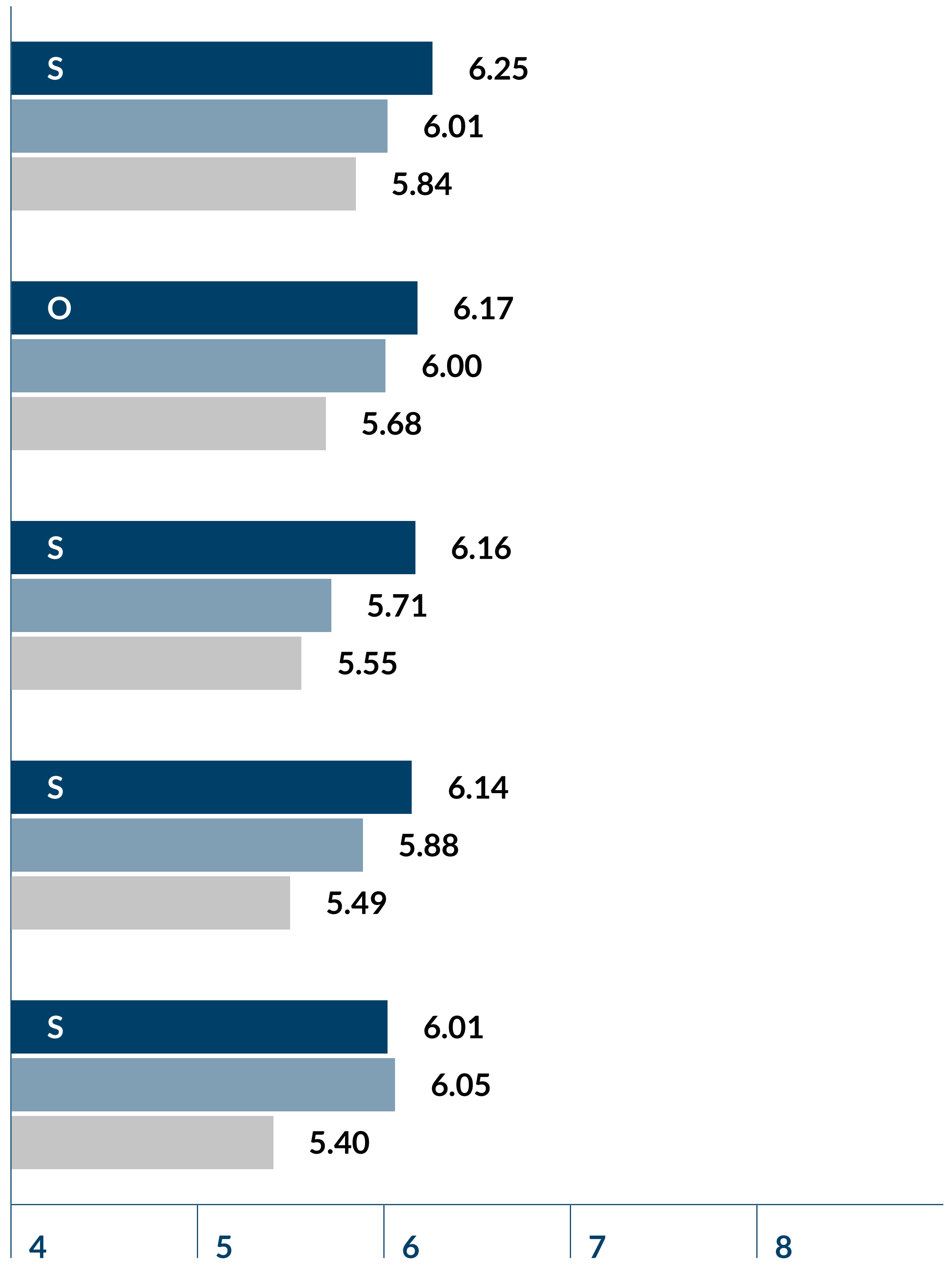
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation

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

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 organisation

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



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

FIGURE 11B

CEOs — 2032

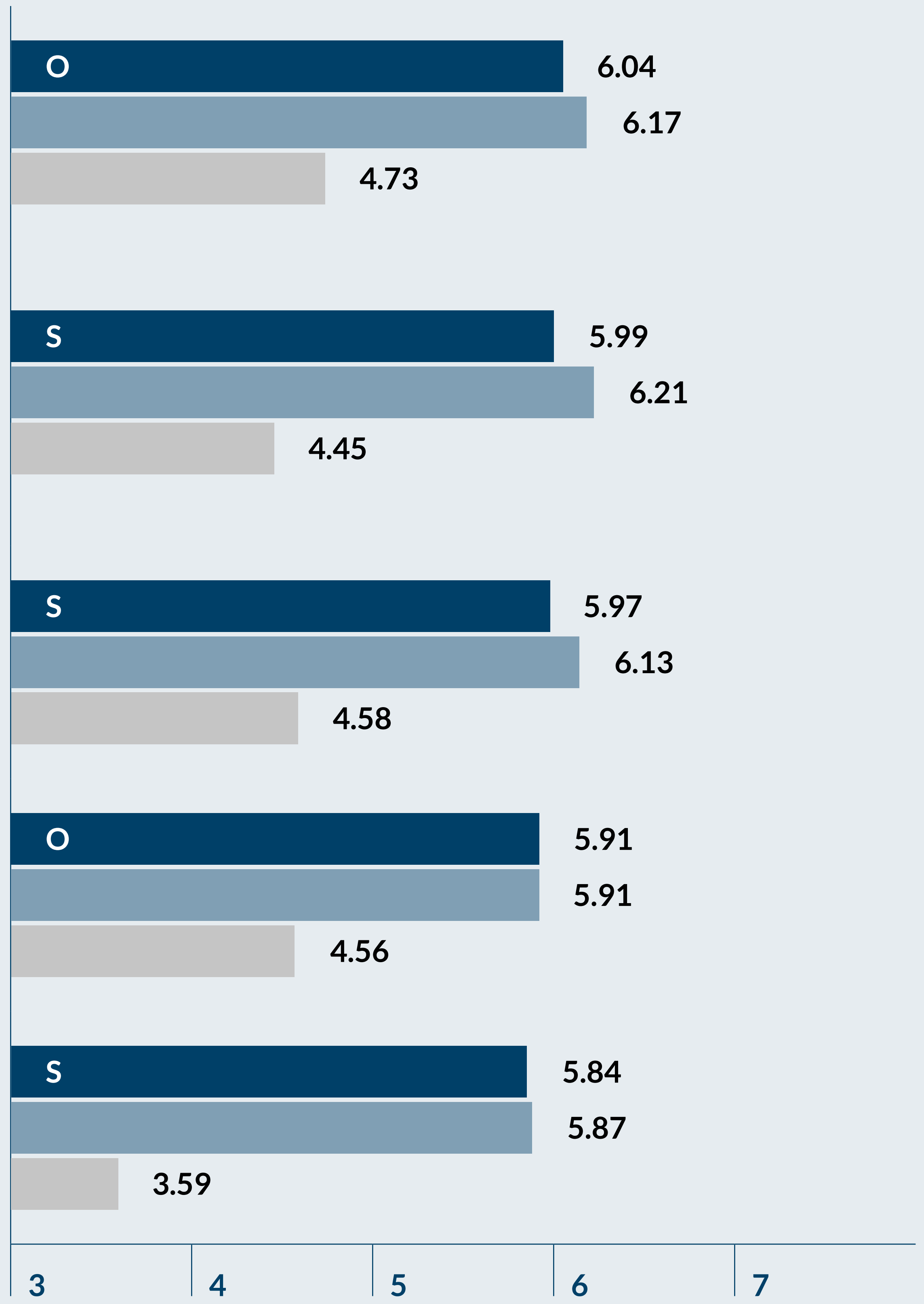
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

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

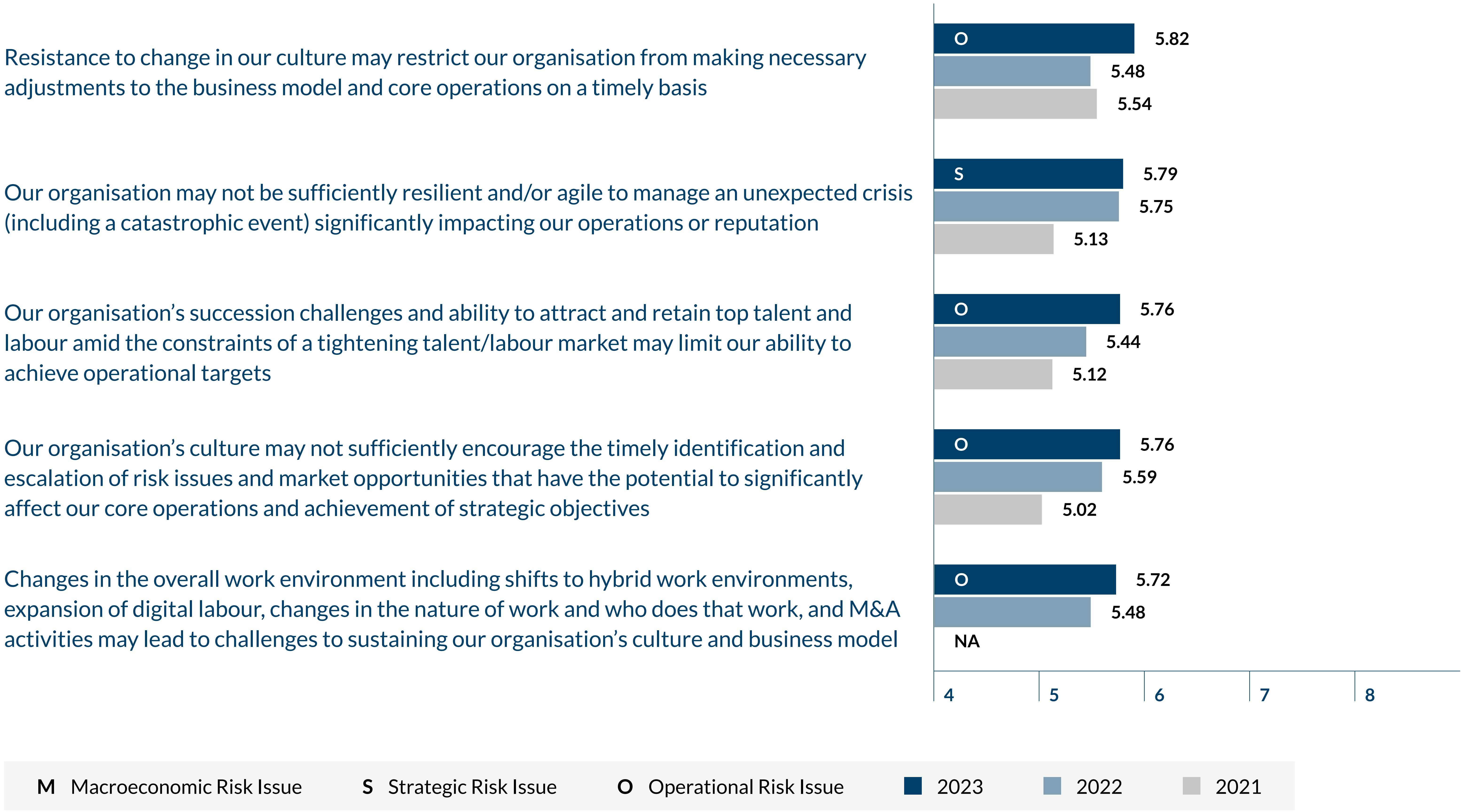
Rapidly expanding developments in social media and platform technology innovations may significantly impact how we do business, interact with our customers, ensure regulatory compliance and/or manage our brand



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

FIGURE 12A

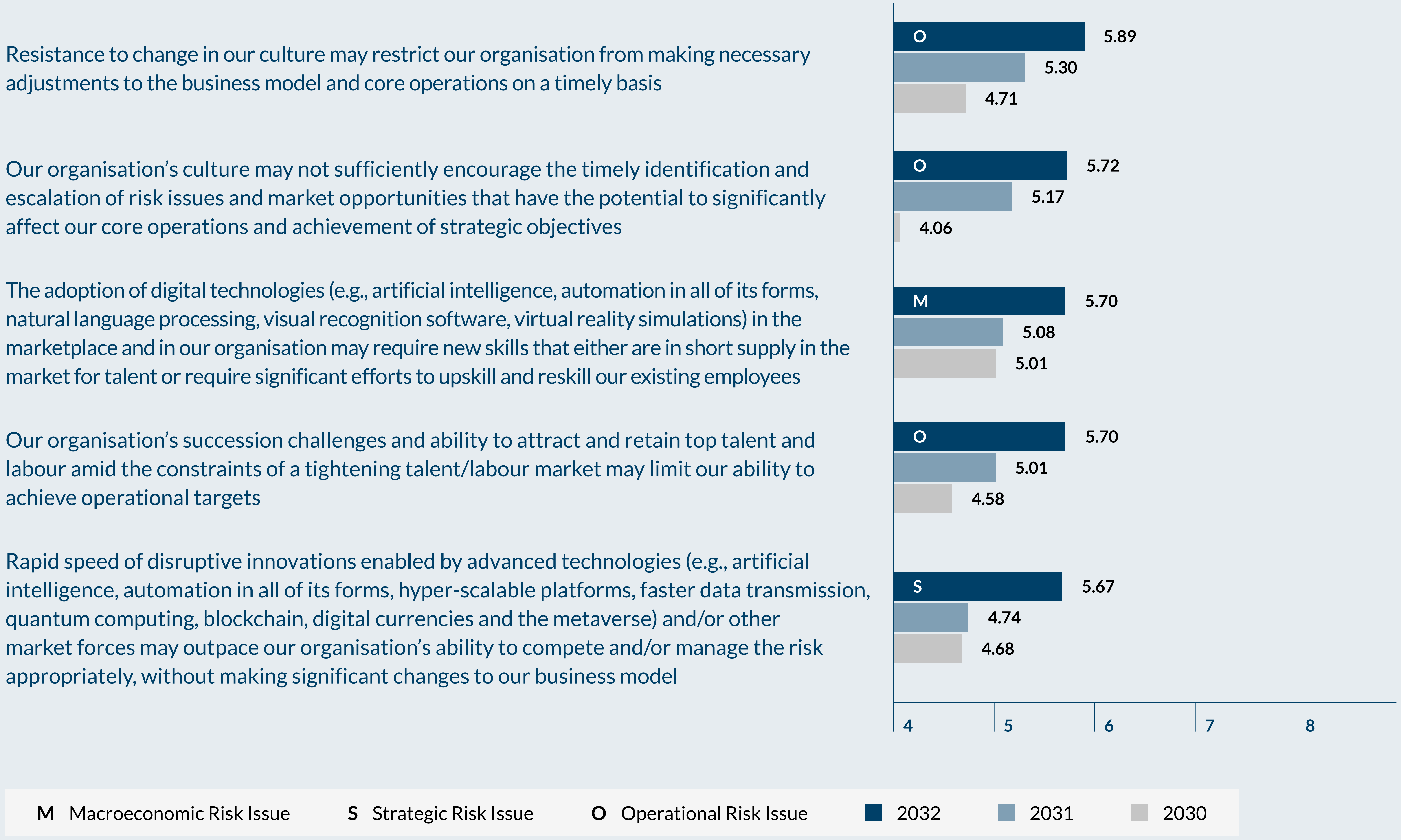
CFOs — 2023



Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	5.82	5.48	5.54
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	S	5.79	5.75	5.13
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.76	5.44	5.12
Our organisation’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	O	5.76	5.59	5.02
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation’s culture and business model	O	5.72	5.48	NA

FIGURE 12B

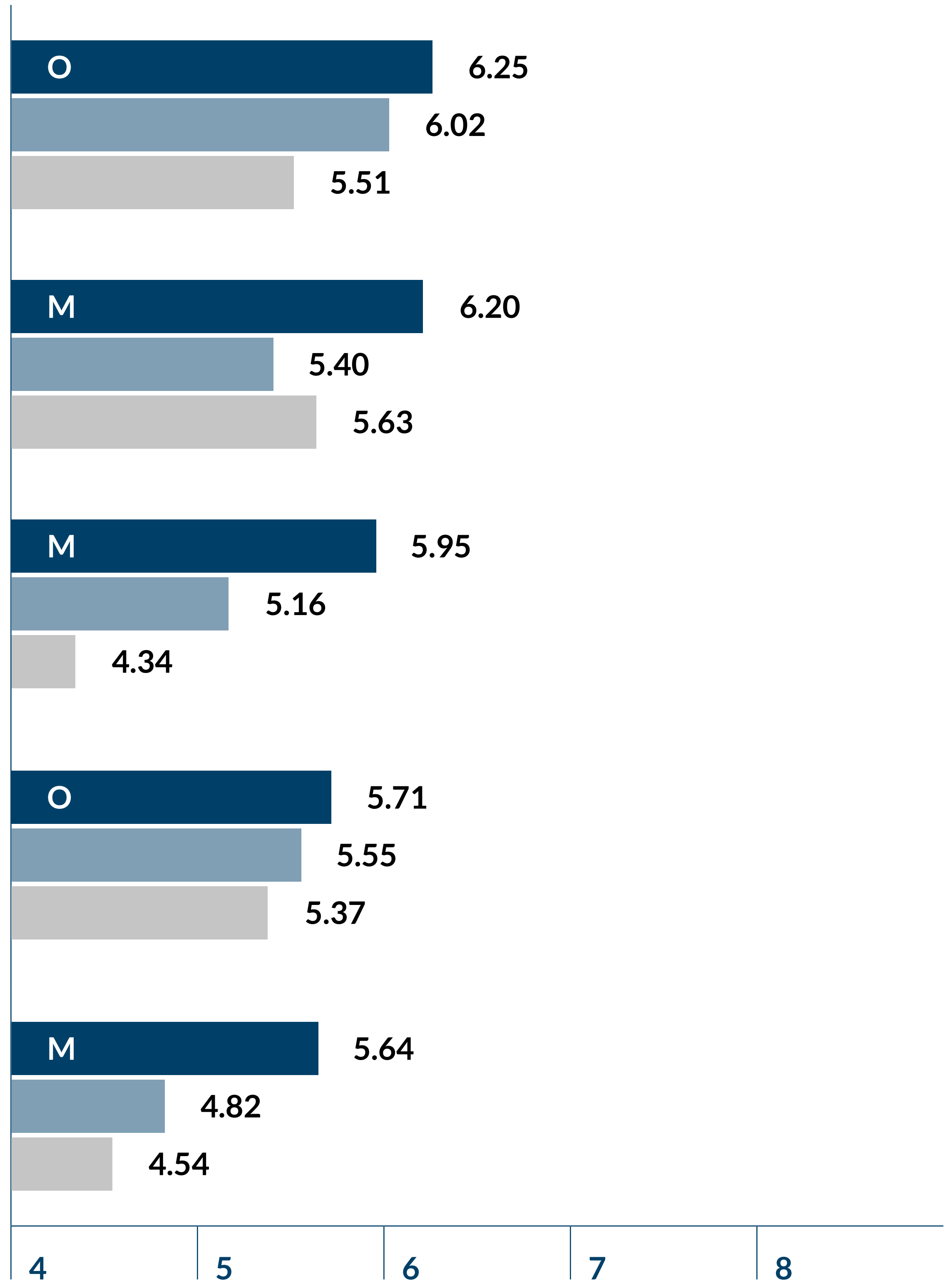
CFOs — 2032



Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	5.89	5.30	4.71
Our organisation'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	O	5.72	5.17	4.06
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 organisation 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	M	5.70	5.08	5.01
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.70	5.01	4.58
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	S	5.67	4.74	4.68

FIGURE 13A

CROs — 2023



Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour 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 organisation

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

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 organisational targets or impact our brand image

The current interest rate environment may have a significant effect on the organisation's capital costs and operations

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

FIGURE 13B

CROs — 2032

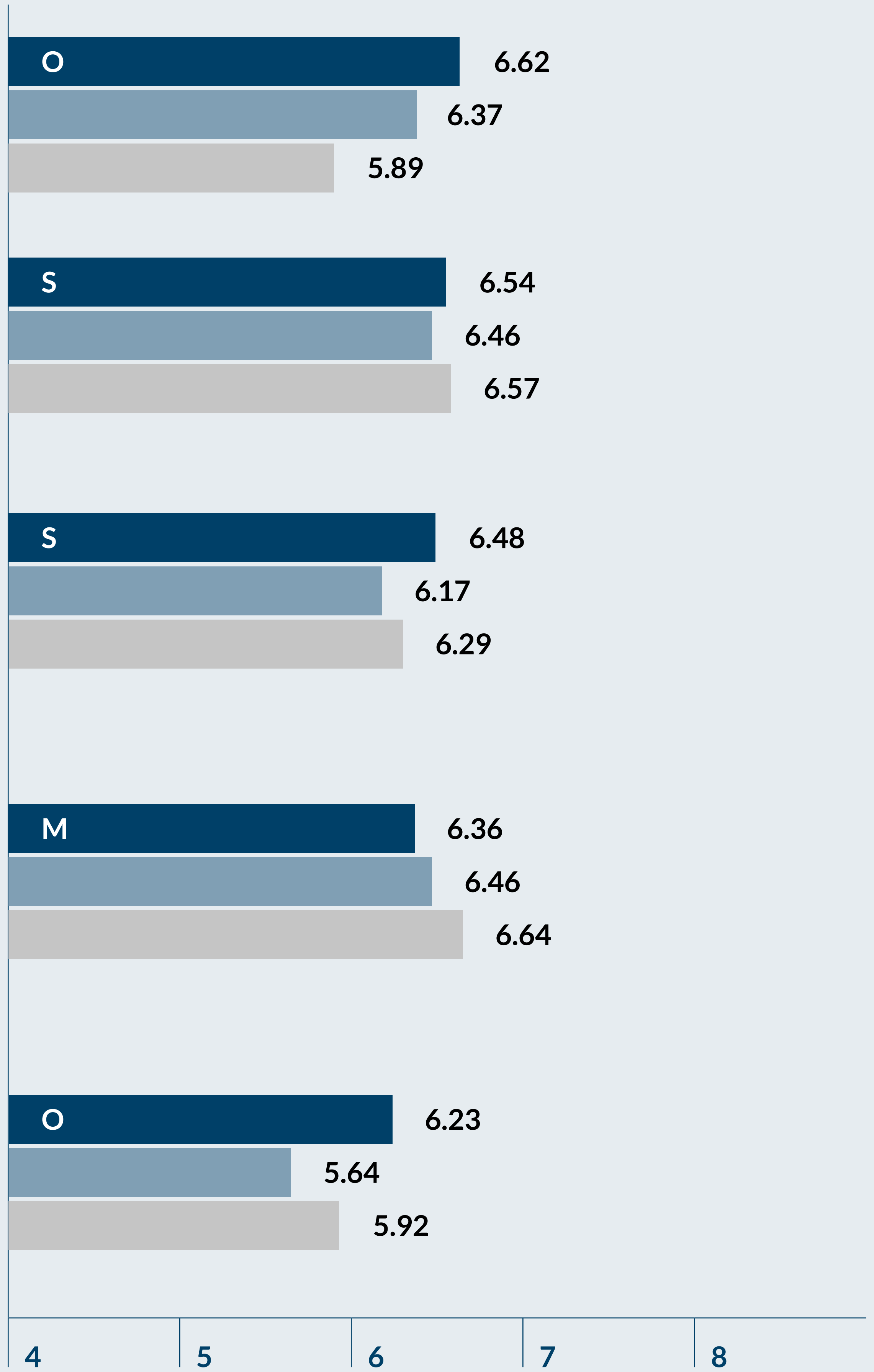
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our 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 organisation 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 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



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

FIGURE 14A

CAEs — 2023

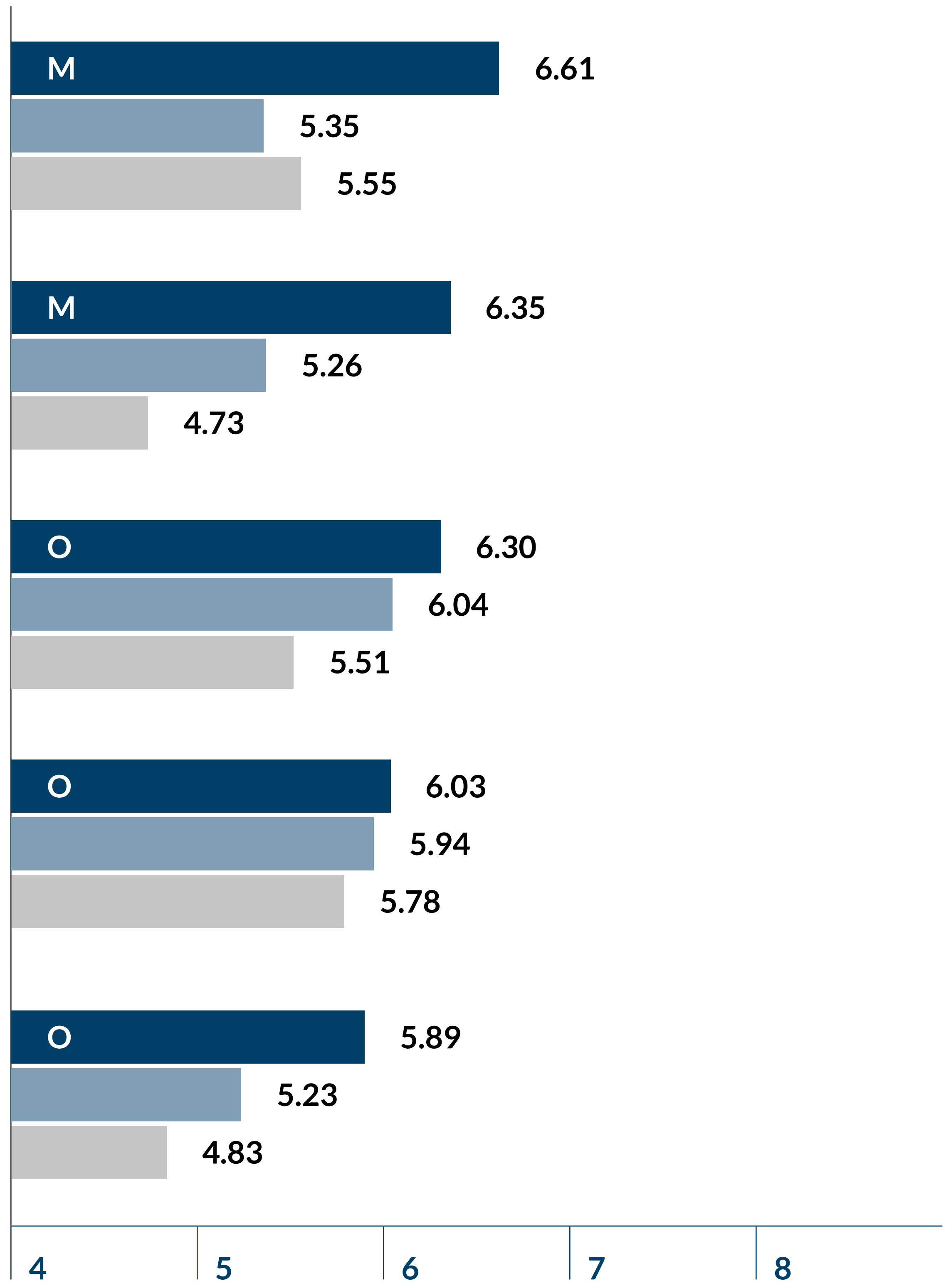
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation

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

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

Our organisation 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

Uncertainty surrounding our organisation'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 14B

CAEs — 2032

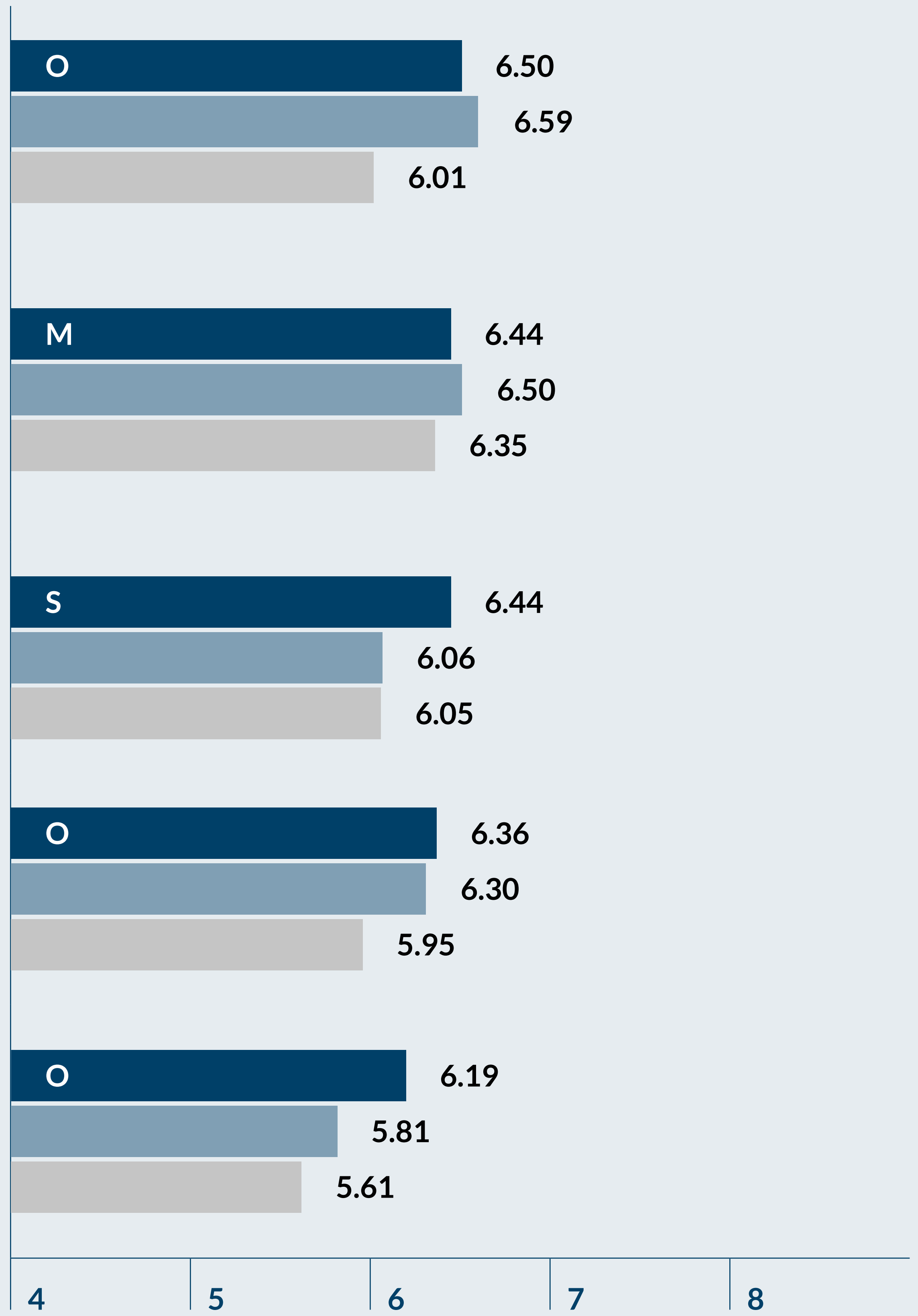
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation 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

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

Our organisation 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

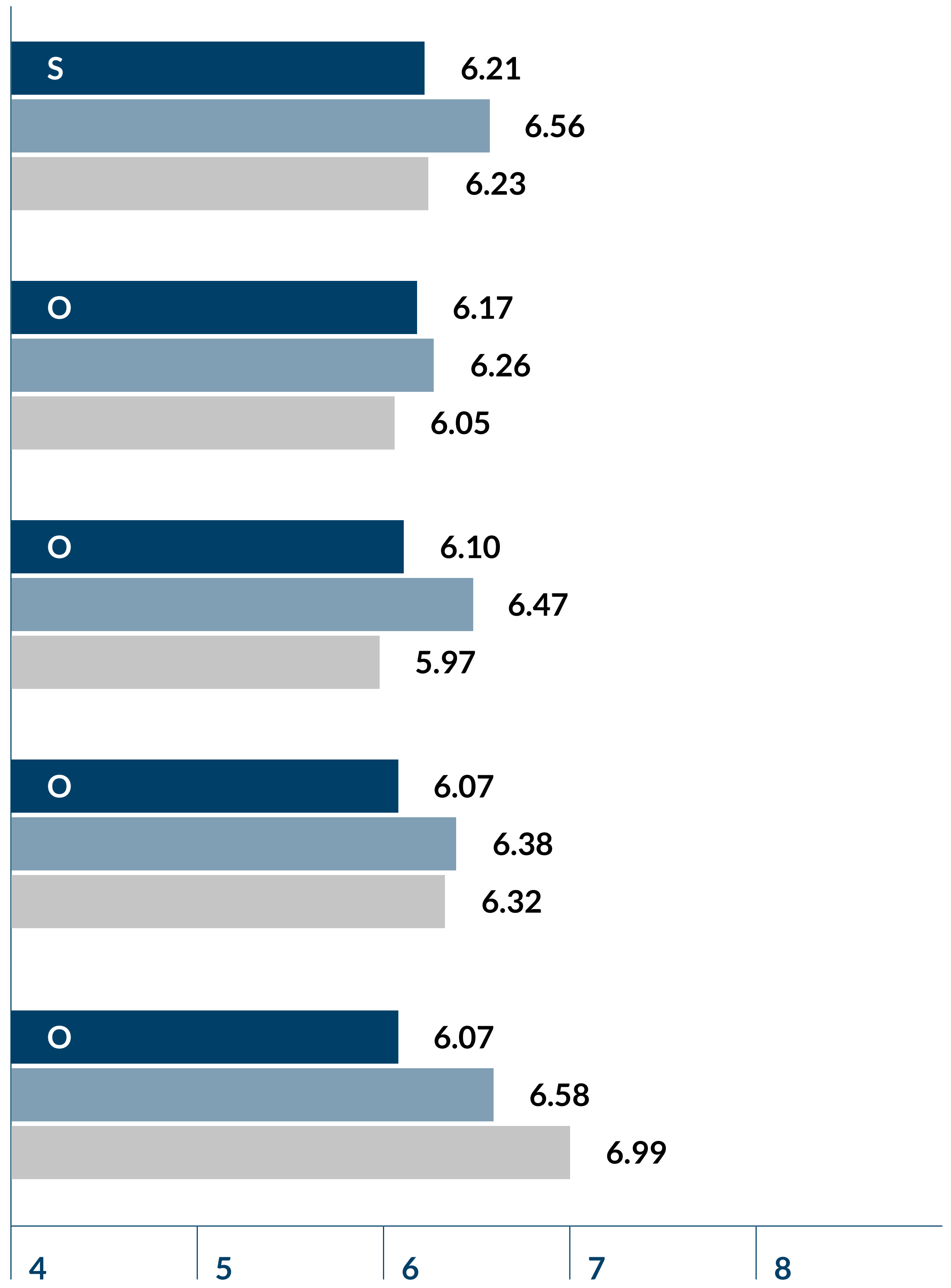
Third-party risks arising from our reliance on outsourcing and strategic sourcing arrangements, ecosystem partners, IT vendor contracts, and other partnerships/joint ventures to achieve operational and go-to-market goals may prevent us from meeting organisational targets or impact our brand image



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

FIGURE 15A

CIOs/CTOs — 2023



Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	S	6.21	6.56	6.23
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	6.17	6.26	6.05
Our organisation'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	O	6.10	6.47	5.97
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	6.07	6.38	6.32
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	O	6.07	6.58	6.99

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

FIGURE 15B

CIOs/CTOs — 2032

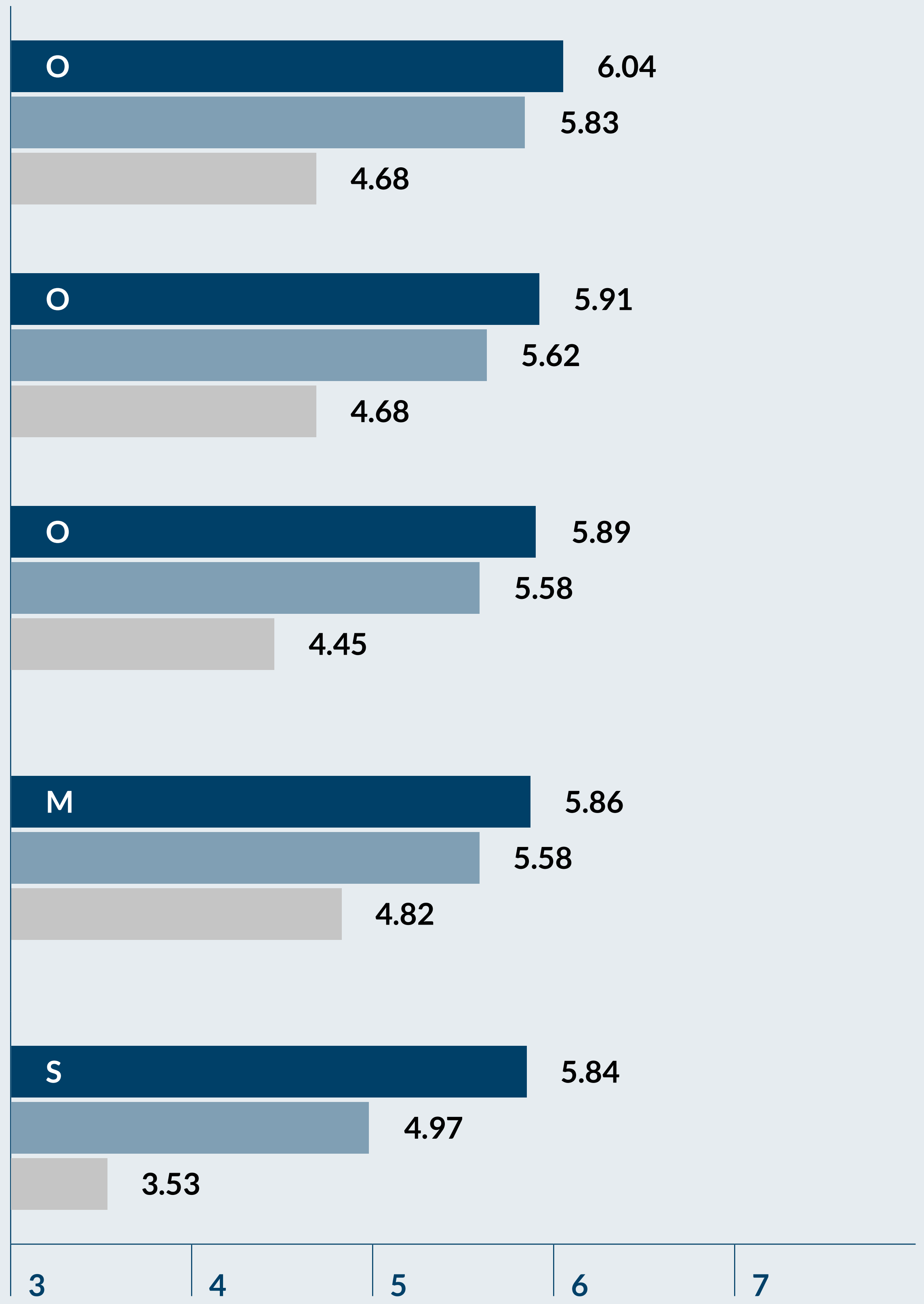
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis

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

Our organisation'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

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 organisation 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

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



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

FIGURE 16A

CSOs — 2023

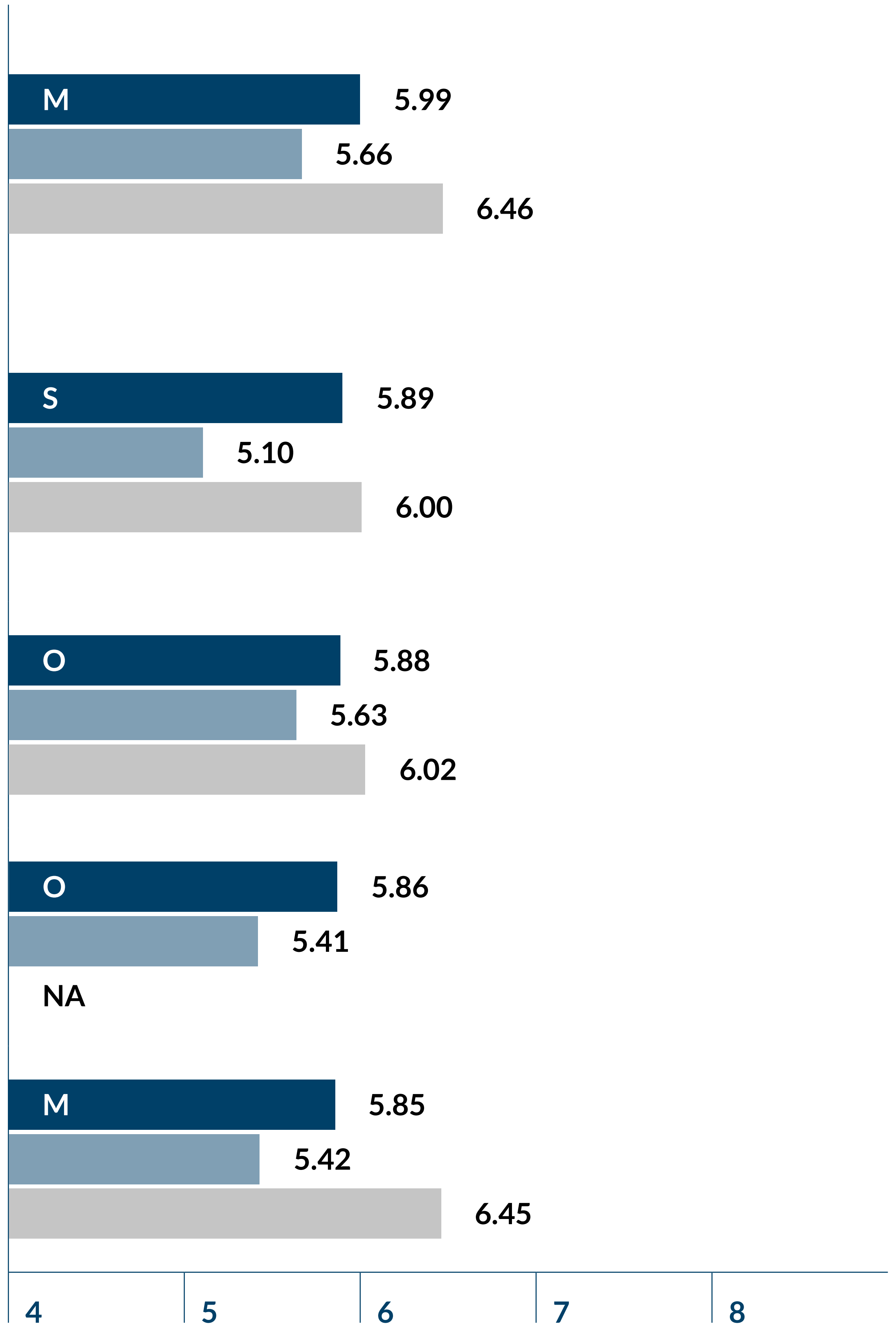
Shifts in perspectives and expectations about social issues and priorities surrounding diversity, equity and inclusion (e.g., board composition, representation in the C-suite and leadership ranks, and onboarding policies) are occurring faster than the pace at which our organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

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

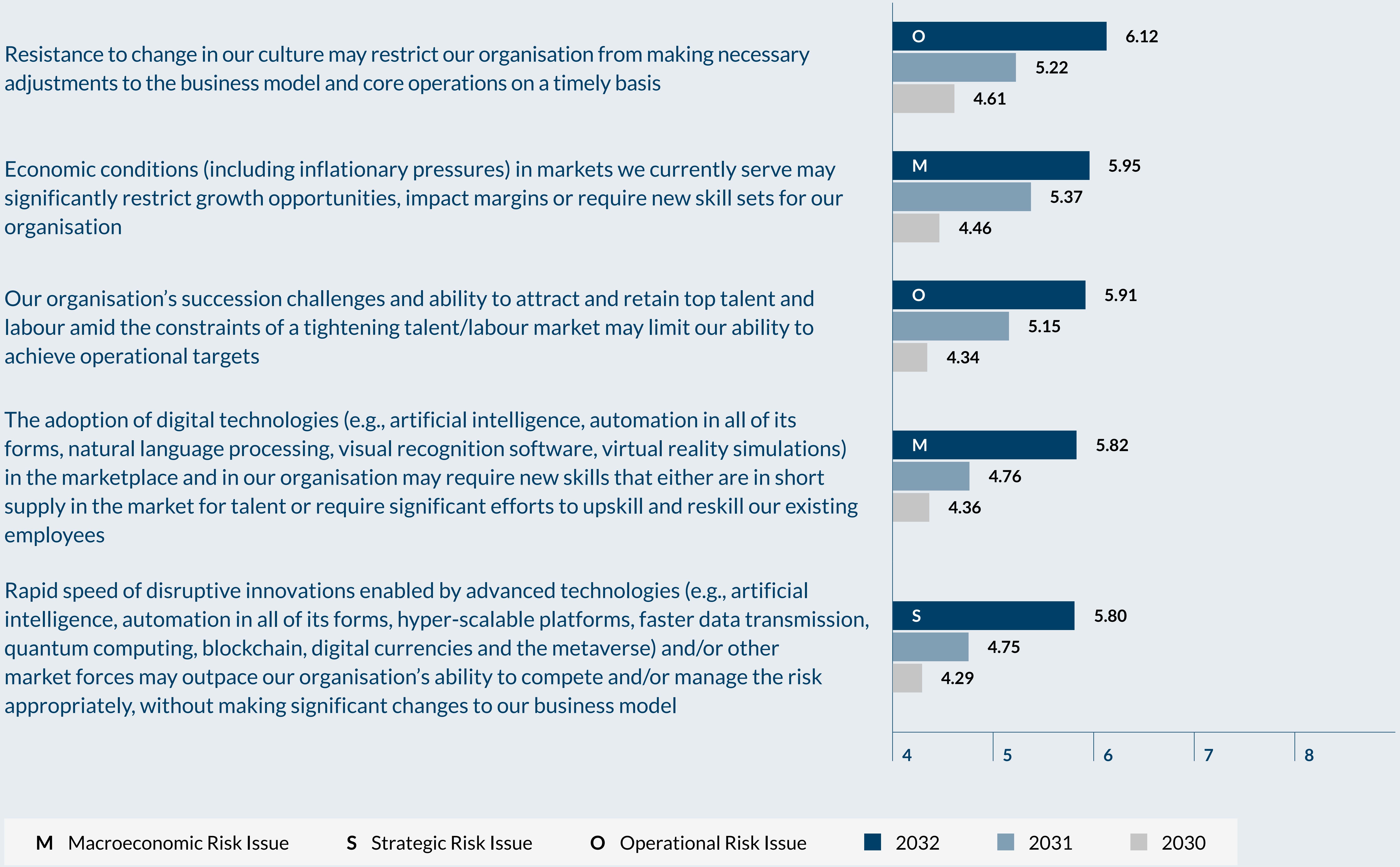
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation



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

FIGURE 16B

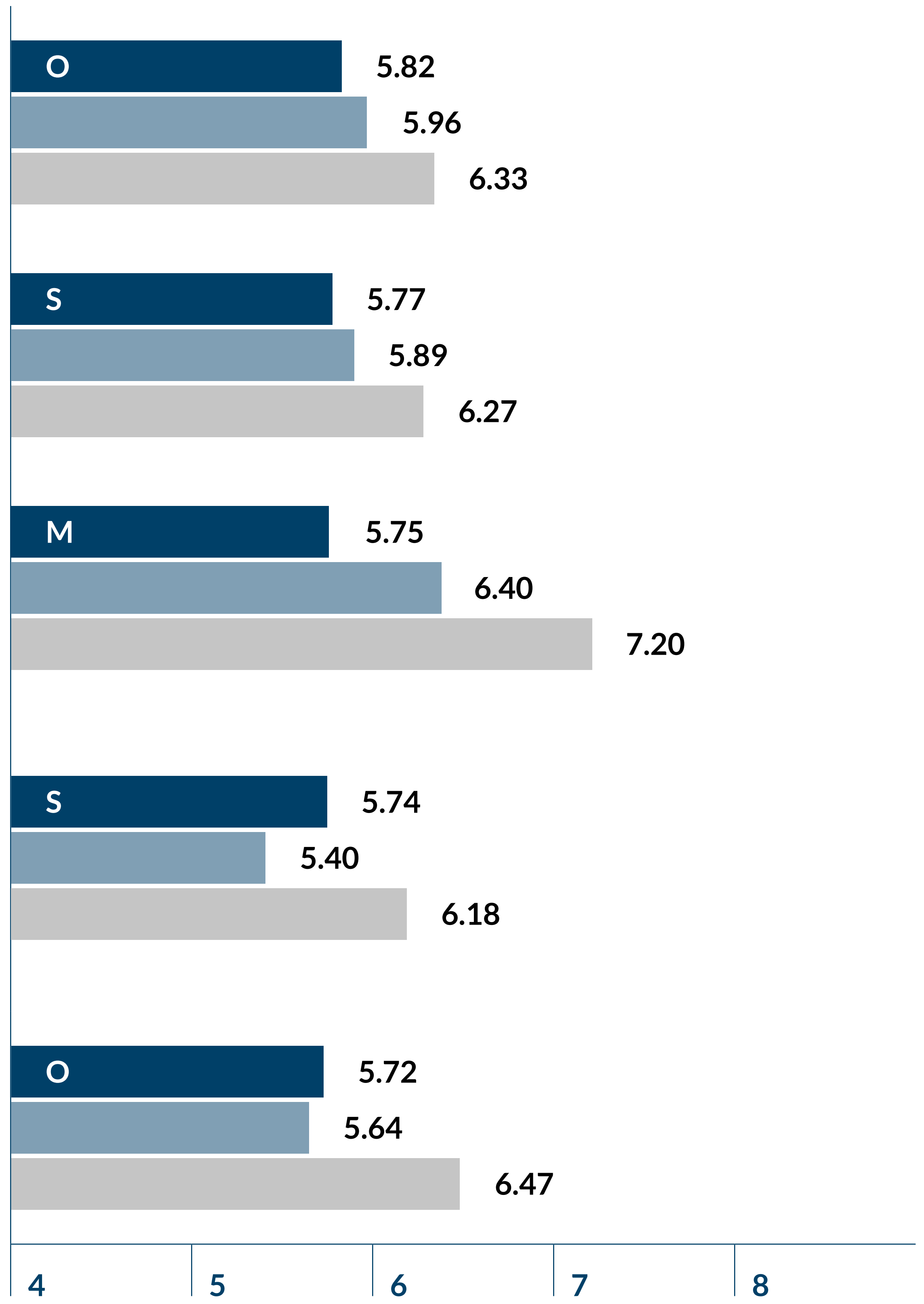
CSOs — 2032



Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	6.12	5.22	4.61
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	M	5.95	5.37	4.46
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.91	5.15	4.34
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 organisation 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	M	5.82	4.76	4.36
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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model	S	5.80	4.75	4.29

FIGURE 17A

CDOs — 2023



Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	5.82	5.96	6.33
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation	S	5.77	5.89	6.27
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	M	5.75	6.40	7.20
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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model	S	5.74	5.40	6.18
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.72	5.64	6.47

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

FIGURE 17B

CDOs — 2032

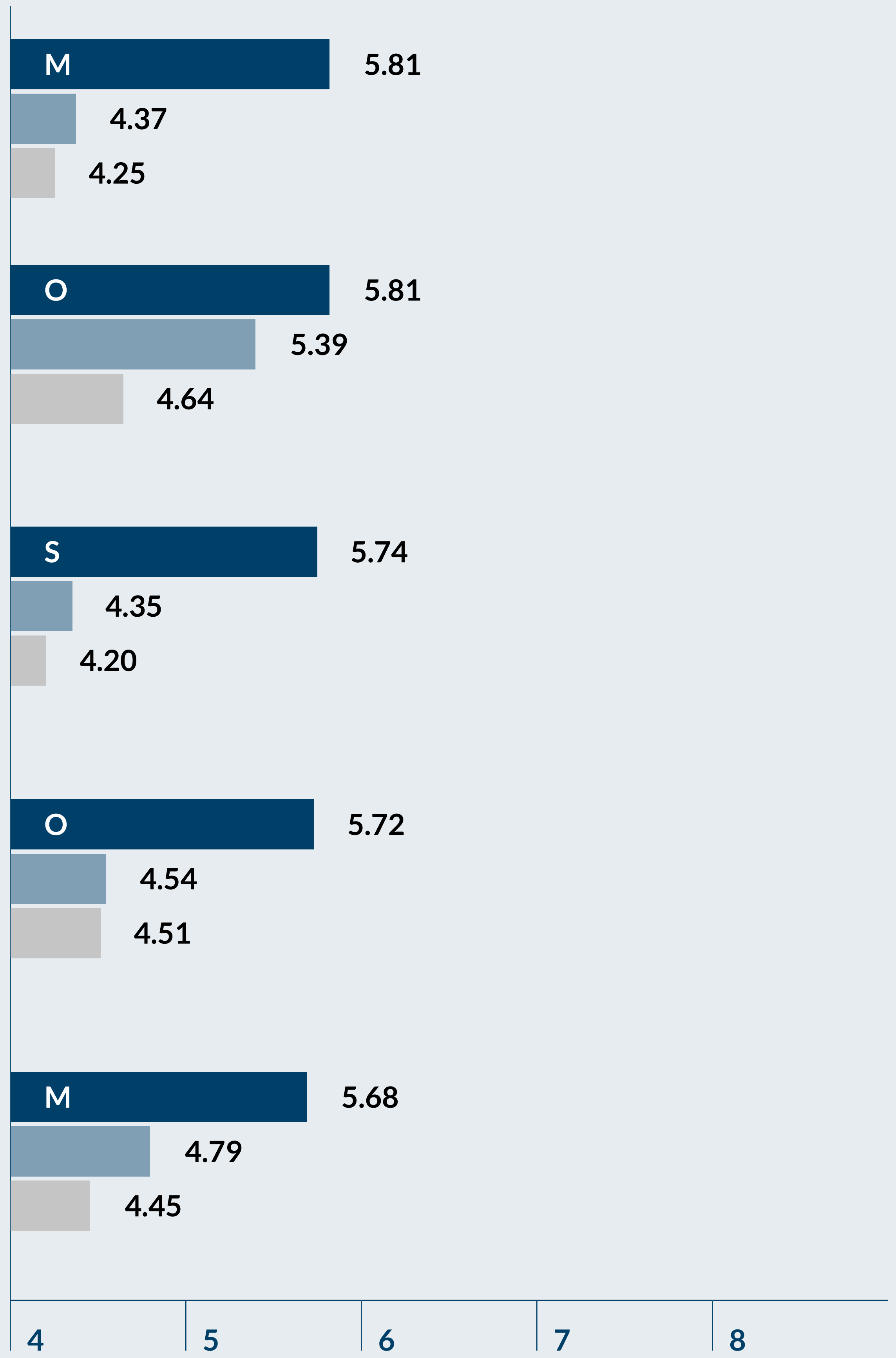
Anticipated increases in labour costs may affect our opportunity to meet profitability targets

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

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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

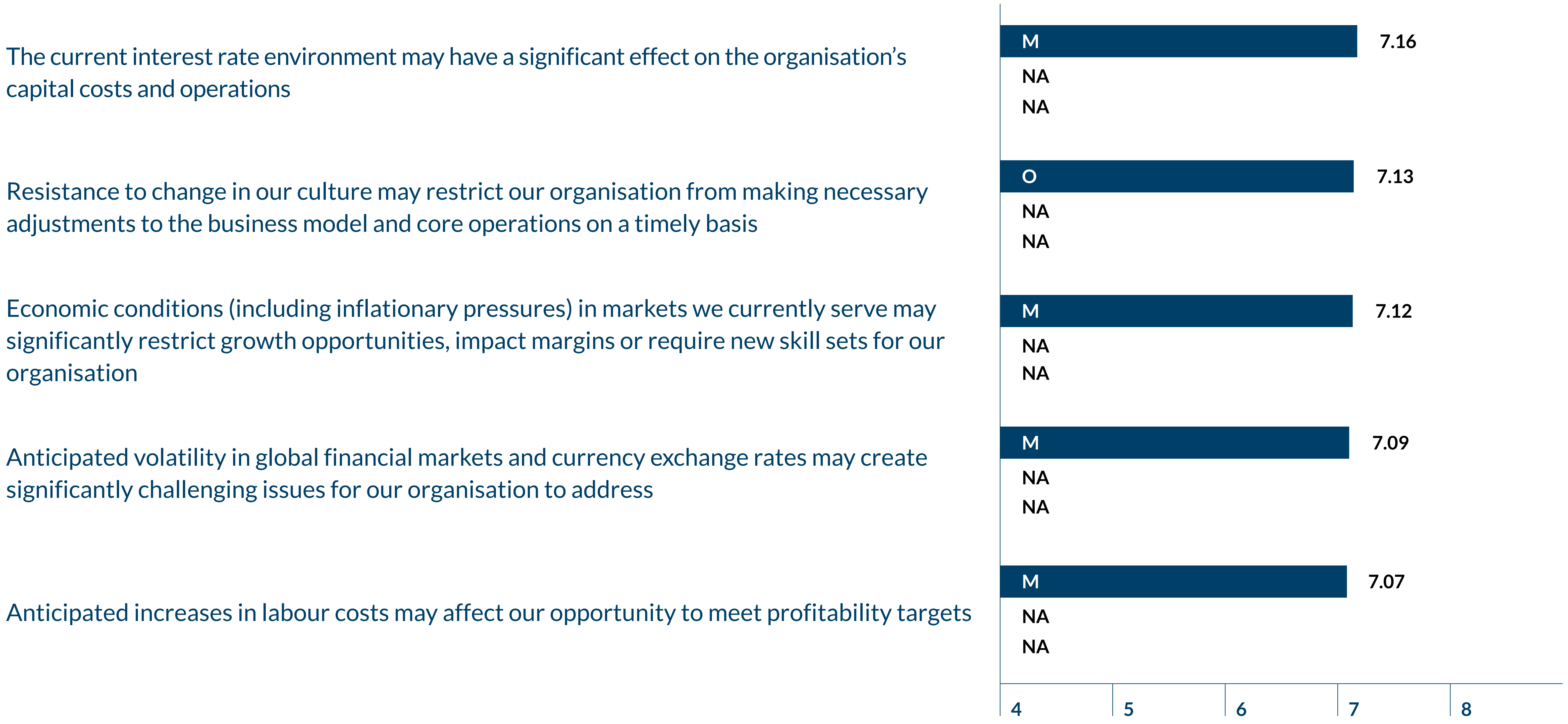
The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organisation may require new skills that either are in short supply in the market for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



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

FIGURE 18A

CHROs — 2023



The current interest rate environment may have a significant effect on the organisation's capital costs and operations

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

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

Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation to address

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

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

FIGURE 18B

CHROs — 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	M	7.19	NA	NA
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation	M	7.19	NA	NA
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	M	7.16	NA	NA
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	S	7.12	NA	NA
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	S	7.11	NA	NA

FIGURE 19A

Other C-Suite — 2023

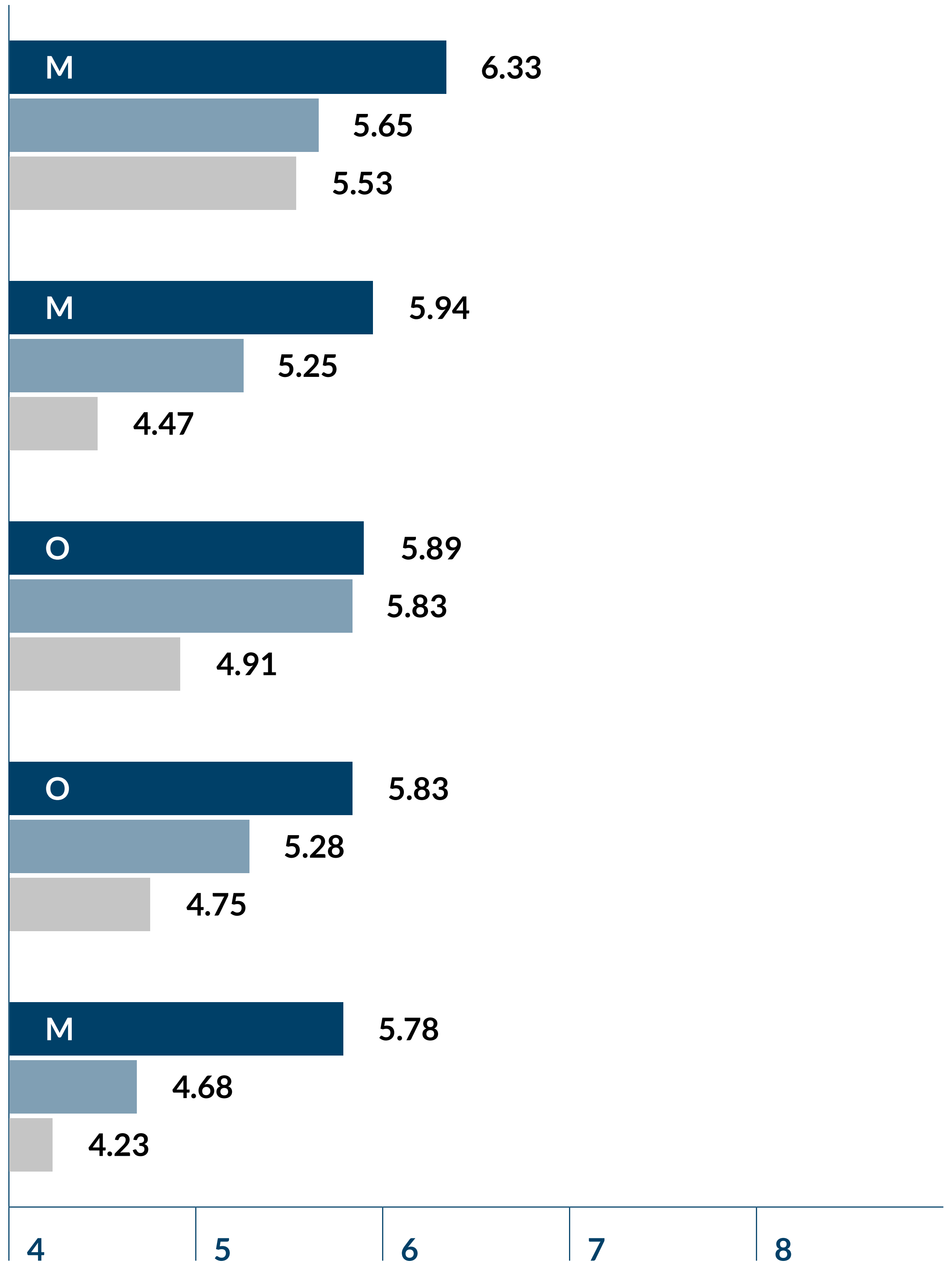
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation

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

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

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

The current interest rate environment may have a significant effect on the organisation's capital costs and operations



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

FIGURE 19B

Other C-Suite — 2032

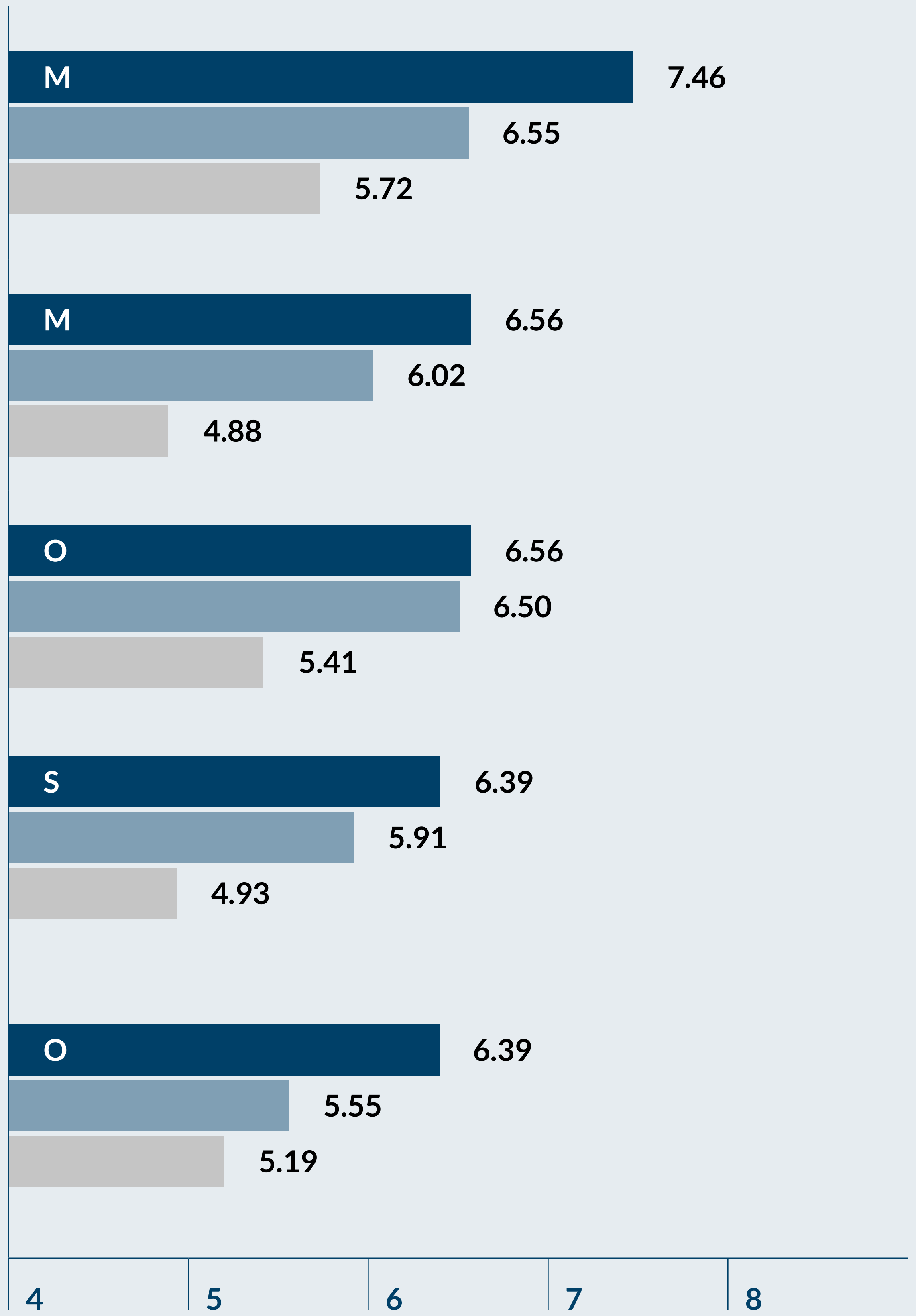
The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organisation may require new skills that either are in short supply in the market for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

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

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

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

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



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

Analysis across industry groups

Respondents to our survey represent organisations in a number of industry groupings. We analyse responses across six industry groups to determine whether industries rank-order risks differently. Similar to our analysis of the full sample and across the different sizes of organisations and types of respondents, we analyse responses about overall impressions of the magnitude and severity of risks across industry groups. Again, the scores in Figure 20 reflect responses using a 10-point scale where 1 = "Extremely Low" and 10 = "Extremely High."

Industry group	Number of respondents
Financial Services (FS)	219
Consumer Products and Services (CPS)	326
Manufacturing and Distribution (MD)	278
Technology, Media and Telecommunications (TMT)	175
Healthcare (HC)	66
Energy and Utilities (EU)	122
Other industries (not separately reported)	118
Total number of respondents	**1,304**

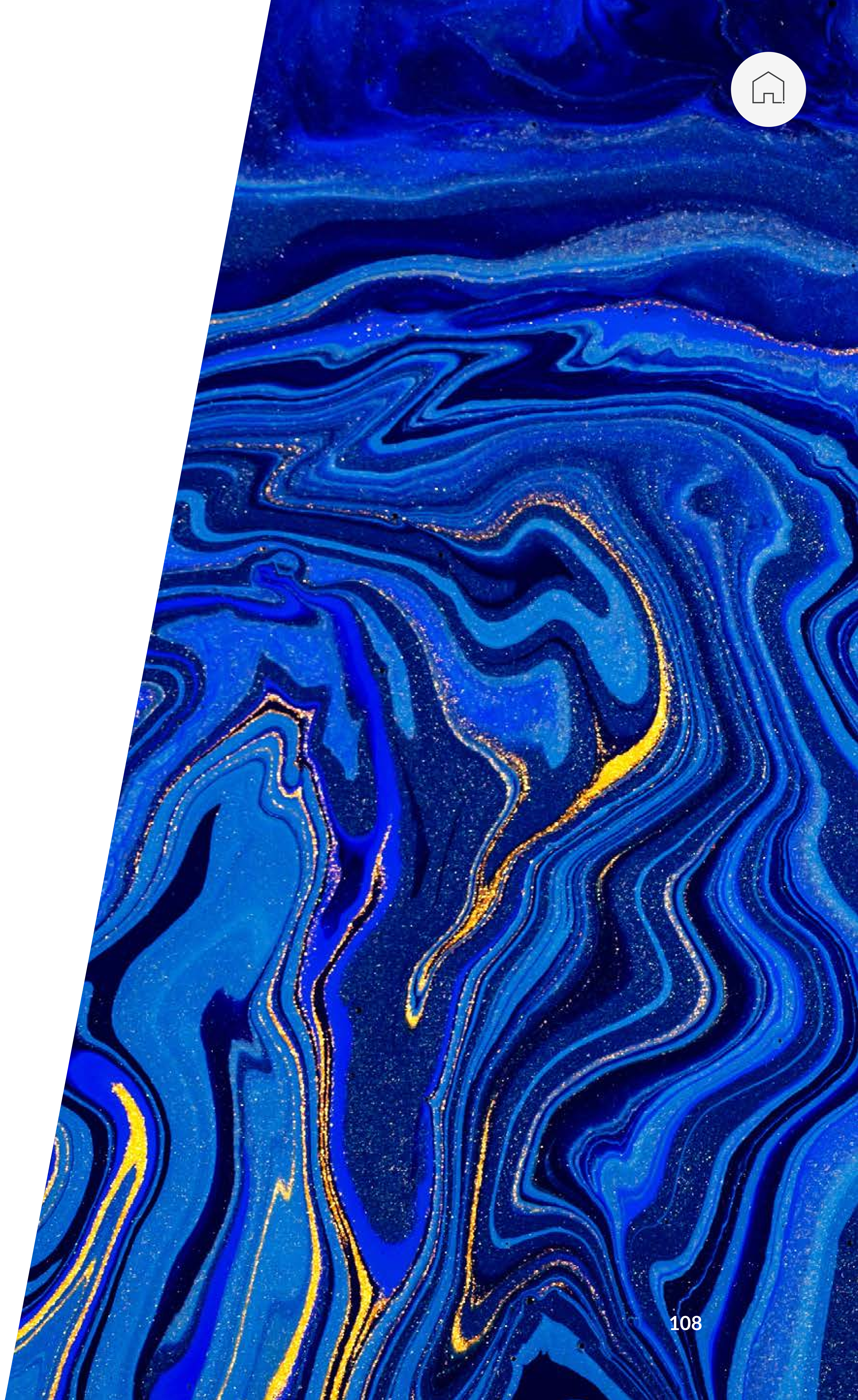
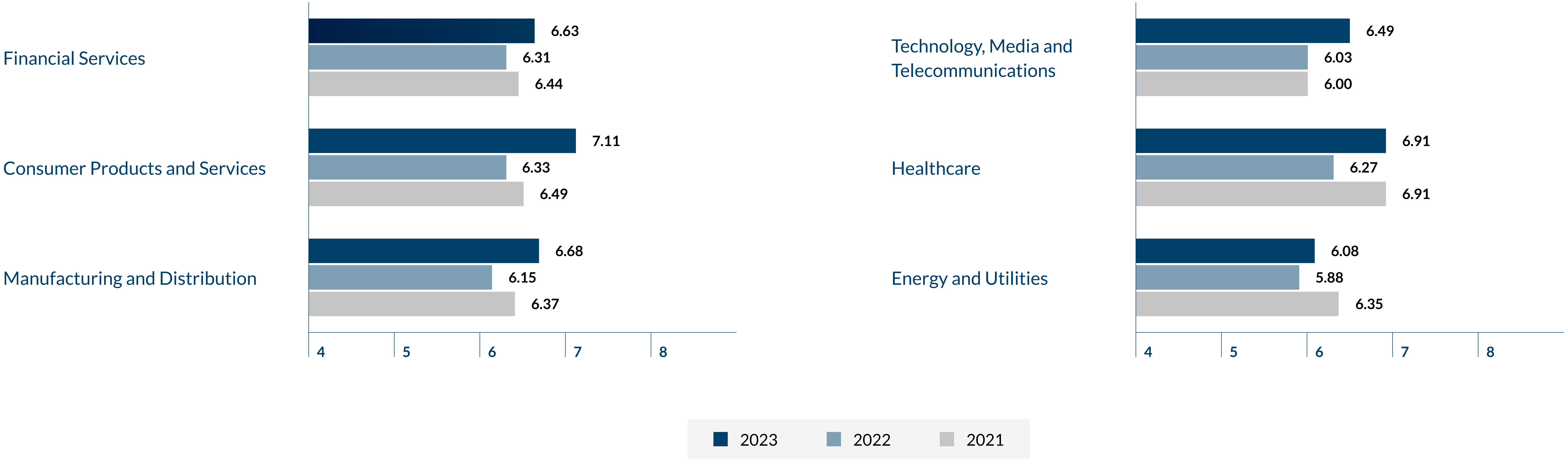


FIGURE 20

Overall, what is your impression of the magnitude and severity of risks your organisation will be facing with respect to achieving its objectives and reaching or exceeding profitability (or funding) targets over the next 12 months?



Respondents from every industry group perceive that the magnitude and severity of risks their organisations face will be greater looking ahead to 2023 than they did in 2022. We do observe some contrast in perspectives across different industry groups, which suggests that the industry context is important to consider as business leaders anticipate risks on the horizon. However, given that a number of organisations' business models may not fit neatly into a particular industry group, there is value in observing what risks are on the minds of executives in other industries.

Consistent with prior reports, we use the colour-coding scheme in the accompanying table to highlight risks visually using three categories. In Table 12, we provide a summary of the impact assessments for each of the 38 risks for 2023 by industry group using this colour-coding scheme:

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**	🟢

Table 12 shows the average risk scores for 2023 to highlight differences in views about individual risks across different industry groups. In Table 13, we show 2032 results along with 2023 results.

TABLE 12

Industry

Macroeconomic Risk Issues	FS	CPS	MD	TMT	HC	EU
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	🟡	🔴	🔴	🔴	🔴	🟡
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	🟡	🔴	🔴	🟡	🔴	🟡
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	🟡	🔴	🟡	🟡	🔴	🟡
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 organisation 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	🟡	🟡	🟡	🔴	🔴	🟡
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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	🟡	🔴	🟡	🟡	🟡	🟡
Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation 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	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🟡	🟡	🟡
The current interest rate environment may have a significant effect on the organisation's capital costs and operations	🟡	🟡	🟡	🟡	🟡	🟡

Macroeconomic Risk Issues (continued)	FS	CPS	MD	TMT	HC	EU
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation	🟡	🟡	🟡	🟡	🟡	🟡
Evolving changes in global trade policies (e.g., post-Brexit implementations, escalating tariffs, border restrictions and shifts to multilateralism) as well as assumptions underlying globalisation may affect our ability to operate effectively and efficiently in international markets	🟢	🟡	🟡	🟡	🟡	🟡
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	🟢	🟡	🟡	🟡	🟡	🟡

Strategic Risk Issues	FS	CPS	MD	TMT	HC	EU
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	🟡	🔴	🟡	🔴	🟡	🟡
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	🟡	🟡	🟡	🟡	🔴	🟡
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered	🟡	🟡	🟡	🟡	🔴	🟡
Growth opportunities through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	🟡	🟡	🟡	🟡	🔴	🟡
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base	🟡	🔴	🟡	🟡	🟡	🟢
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation	🟡	🟡	🟡	🟡	🟡	🟡

Strategic Risk Issues (continued)	FS	CPS	MD	TMT	HC	EU
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	🟡	🟡	🟡	🟡	🟡	🟡
Our organisation 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	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🟡	🟡	🟡
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation’s strategic plan and vision	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🟡	🟡	🟢
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	🟡	🟡	🟡	🟡	🟡	🟢
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	🟡	🟡	🟡	🟡	🟡	🟢

Operational Risk Issues	FS	CPS	MD	TMT	HC	EU
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	🟡	🔴	🟡	🔴	🔴	🟡
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	🟡	🔴	🟡	🔴	🟡	🟡
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation’s culture and business model	🟡	🔴	🟡	🟡	🔴	🟡
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 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	🟡	🔴	🟡	🟡	🔴	🟡
Uncertainty surrounding our organisation’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	🟡	🔴	🔴	🟡	🟡	🟡
Our organisation 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	🟡	🟡	🟡	🟡	🔴	🟡
Our organisation’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 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	🟡	🟡	🟡	🟡	🟡	🟡

Operational Risk Issues (continued)	FS	CPS	MD	TMT	HC	EU
Inability to utilise 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	🟡	🟡	🟡	🟡	🟡	🟡
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 organisational targets or impact our brand image	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🟡	🟡	🟡
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 risk concerns

Figure 20 reveals that respondents from the six industry groups perceive that the magnitude and severity of risks in the overall environment affecting their organisation will increase in 2023 from the 2022 levels and, with the exception of the Healthcare and Energy and Utilities industry groups, will be higher than 2021. When comparing the number of risks appearing in both the 2023 and 2022 surveys that are rated at the "Significant Impact" level, there is not a substantial difference in the collective number of risks at that level across all industries for 2023 compared to 2022. The biggest increase in overall risk impressions for 2023 is reported by the Consumer Products and Services industry group, which went from just two "Significant Impact" risks for 2022 to 12 for 2023. The Healthcare and Technology, Media and Telecommunications industry groups also show large increases in "Significant Impact" risks in 2023. Healthcare jumped from four to 12 and Technology, Media and Telecommunications from zero to seven.

On the other hand, Financial Services respondents have decreased the number of risks that are considered "Significant Impact" from two in 2022 to none for 2023. The overall differences in perceptions about the risk environment and about specific risks suggest there is an elevation in concerns among the Consumer Products and Services, Healthcare, and Technology, Media and Telecommunications industry groups, and for the other industry groups there appears to be a general easing of individual risk concerns.

2032 risk issues

Except for Energy and Utilities, industry groups appear more concerned about risk conditions in 2032 as compared to 2023. The Consumer Products and Services industry group stands out by rating 15 of the 38 risks for 2032 as "Significant Impact." Both the Healthcare and Technology, Media and Telecommunications industry groups also have 10 or more risks rated as "Significant Impact" for 2032.

Operational risks dominate for the Technology, Media and Telecommunications industry group, while Healthcare organisations consider strategic risks to be most concerning. The Energy and Utilities industry group rates only one of the 2032 risks at the "Significant Impact" level.

> *Most industry groups appear more concerned about risk conditions in 2032 as compared to 2023.*

TABLE 13

Perceived impact for 2023 and 2032 — by industry group

Macroeconomic Risk Issues	Year	FS	CPS	MD	TMT	HC	EU
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	2023	🟡	🔴	🔴	🔴	🔴	🟡
	2032	🟡	🟡	🟡	🔴	🟡	🟡
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	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	🟡	🟡	🟡	🟡	🔴	🟢
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 organisation 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	🔴	🔴	🔴	🔴	🔴	🟡
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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace	2023	🟡	🔴	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🟡	🟡	🟡
Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation to address	2023	🟡	🟡	🟡	🔴	🟡	🟡
	2032	🟡	🟡	🟡	🟡	🟡	🟡

Macroeconomic Risk Issues (continued)	Year	FS	CPS	MD	TMT	HC	EU
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	🟡	🔴	🟡	🟡	🟡	🟡
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	🟡	🟡	🟡	🟡	🟡	🟡
The current interest rate environment may have a significant effect on the organisation's capital costs and operations	2023	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🟡	🟡	🟡
Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation	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 globalisation may affect our ability to operate effectively and efficiently in international markets	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	🟢	🟡	🟡	🟡	🟡	🟡

Strategic Risk Issues	Year	FS	CPS	MD	TMT	HC	EU
Our organisation 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	🟡	🔴	🟡	🟡	🟡	🟡
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 organisation'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	🟡	🟡	🟡	🔴	🔴	🟡
Growth opportunities through acquisitions, joint ventures and other partnership activities may be difficult to identify and implement	2023	🟡	🟡	🟡	🟡	🔴	🟡
	2032	🟡	🟡	🟡	🟡	🟡	🟡
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	🟡	🔴	🟡	🔴	🟡	🟡
Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation	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	🟡	🔴	🟡	🟡	🟡	🟡
Our organisation 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	🟡	🟡	🟡	🟡	🟡	🟢

Strategic Risk Issues (continued)	Year	FS	CPS	MD	TMT	HC	EU
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	🟡	🟡	🟡	🟡	🟡	🟡
Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation’s strategic plan and vision	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	🟡	🔴	🟡	🟡	🔴	🟡
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	🟡	🔴	🟡	🔴	🔴	🟡
Market conditions imposed by and in response to COVID-19 and emerging variants, including shifts in consumer behaviour to digital channels, may continue to impact customer demand for our core products and services	2023	🟡	🟡	🟡	🟡	🟡	🟢
	2032	🟡	🟡	🟡	🟡	🟡	🟢

Operational Risk Issues	Year	FS	CPS	MD	TMT	HC	EU
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	2023	🟡	🔴	🟡	🔴	🔴	🟡
	2032	🔴	🔴	🔴	🔴	🔴	🟡
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	2023	🟡	🔴	🟡	🔴	🟡	🟡
	2032	🟡	🔴	🔴	🔴	🟡	🟡

Operational Risk Issues (continued)	Year	FS	CPS	MD	TMT	HC	EU
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation’s culture and business model	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 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	🟡	🟡	🟡	🟡	🟡	🟡
Uncertainty surrounding our organisation’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	🟡	🟡	🔴	🟡	🟡	🟡
Our organisation 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 organisation’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 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	🟡	🔴	🟡	🔴	🟡	🟡

Operational Risk Issues (continued)	Year	FS	CPS	MD	TMT	HC	EU
Inability to utilise 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	🟡	🟡	🟡	🟡	🔴	🟡
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 organisational targets or impact our brand image	**2023**	🟡	🟡	🟡	🟡	🟡	🟡
	2032	🟡	🟡	🟡	🟡	🟡	🟡
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	🟢	🟡	🟡	🟡	🟡	🟡

Figures 21-26 on the following pages summarise the top-rated risks by industry group separately for 2023 and 2032. Only the top five risks are reported and, where available, scores for 2022 and 2021 (for comparisons to 2023) and 2031 and 2030 (for comparisons to 2032) are also provided.

Two industry groups rate succession challenges and the ability to attract and retain talent as the top risk for 2023: Technology, Media and Telecommunications, and Healthcare. The other four industry groups include it as a top five risk. The other common risks to appear in the six groups' top five are (1) economic conditions, and (2) anticipated increases in labour costs. The Financial Services industry group cites the interest rate environment as its top risk.

Macroeconomic and operational risks dominate the top five risks for 2023, with only Financial Services and Consumer Products and Services each rating one strategic risk in their top five. Financial Services ranks regulatory change and enhanced regulatory scrutiny as a top five risk and Consumer Products and Services ranks the concern that the organisation may not be resilient as a top five risk. The Energy and Utilities industry group has all operational risks in their top five.

In terms of impact, the Consumer Products and Services, Healthcare, and Technology, Media and Telecommunications industry groups each rate their top five risks as "Significant Impact." On the other hand, the Financial Services and Energy and Utilities industry groups do not rank any of their top five risks as "Significant Impact."

In examining longer-term concerns, three risks — one macroeconomic, one strategic and one operational — are common for at least five of the six industry groups in their top five lists for 2032: the macroeconomic risk related to the adoption of digital technologies, with its implications to reskilling and upskilling existing employees; the strategic risk associated with the rapid speed of disruptive innovation; and the operational risk associated with succession challenges and the ability to attract and retain top talent.

With the exception of the Energy and Utilities industry group, each of the industry groups ranks at least four of the top five 2032 risks at the "Significant Impact" level. The Energy and Utilities industry group rates only one 2032 risk at the "Significant Impact" level: the rising threat of catastrophic natural disasters and weather phenomena.

These noted differences in perceptions of risk issues across the different industry groups highlight the importance of understanding industry drivers and emerging developments in order to identify the most significant enterprise risks and emerging risk concerns in each group.

Following each set of bar charts by industry group, we provide additional commentary about industry-specific risk drivers.

Macroeconomic and operational risks dominate the top five risks for 2023.

FIGURE 21A

Financial Services — 2023

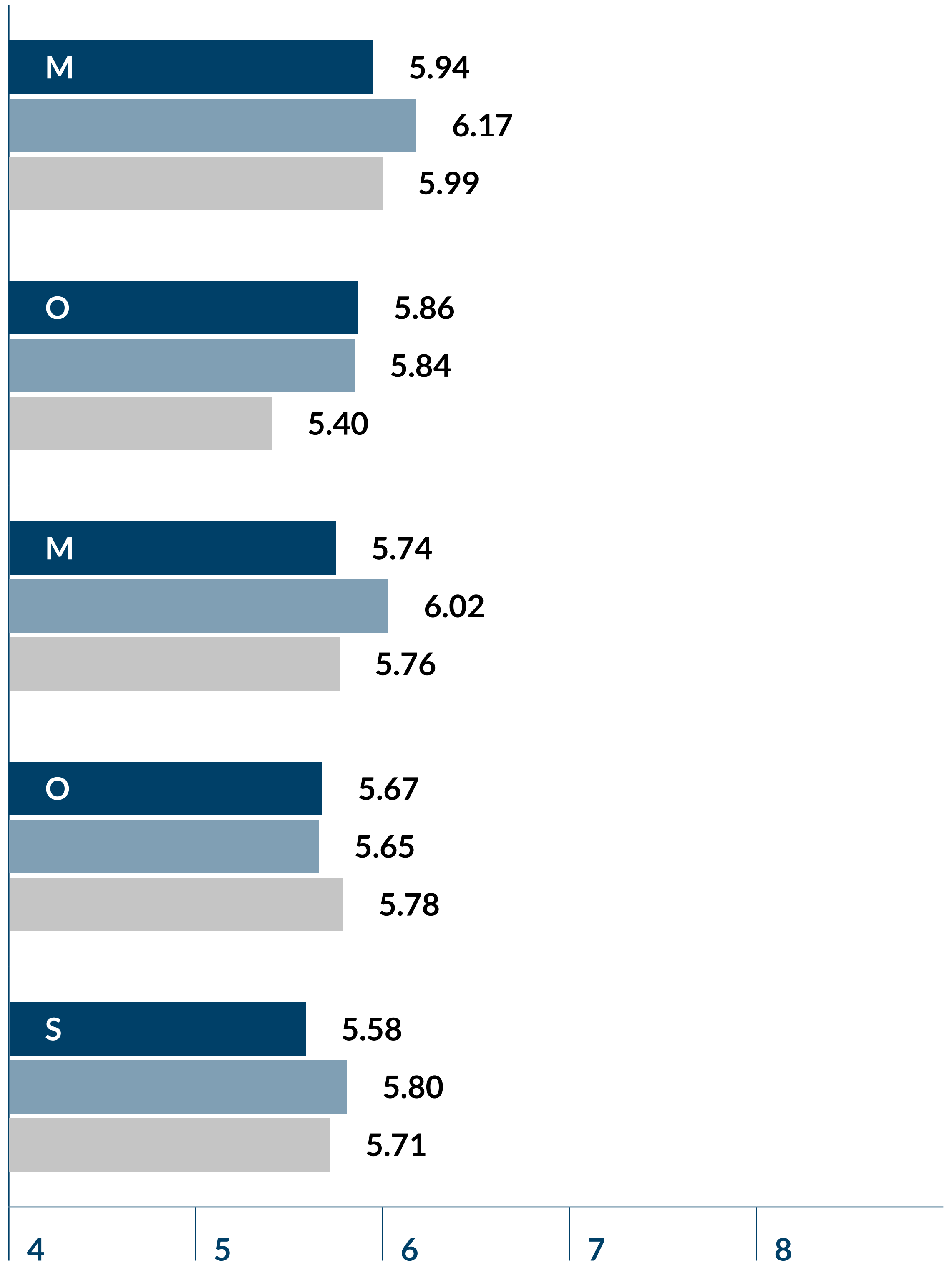
The current interest rate environment may have a significant effect on the organisation’s capital costs and operations

Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour 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 organisation

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

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



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

FIGURE 21B

Financial Services — 2032

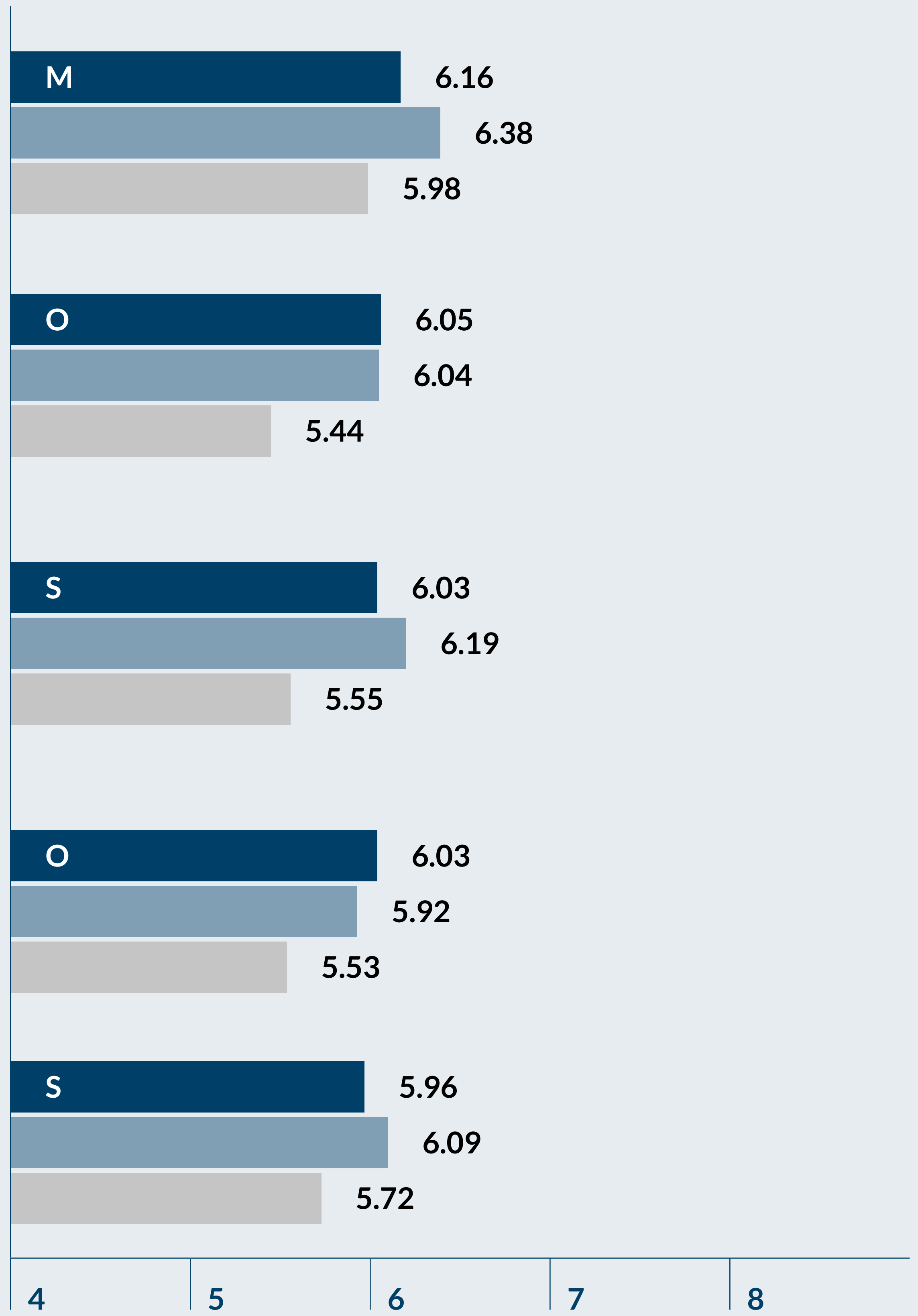
The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organisation may require new skills that either are in short supply in the market for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

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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

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



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

Commentary — Financial Services Industry Group

BY MICHAEL BRAUNEIS
GLOBAL LEADER, FINANCIAL SERVICES INDUSTRY PRACTICE, PROTIVITI

Growing concerns about economic conditions and ongoing talent market challenges headline this year's list of top risks for financial services executives, as the pandemic fades in importance.

Our 2022 Top Risks Survey showed a financial services industry that was clearly seeing the light at the end of the COVID pandemic tunnel and eager to return to more normal business conditions. On the other hand, respondents to last year's survey noted growing concerns about the interest rate environment and ability to compete for talent in a highly competitive and unusual labour market.

This year's survey results largely cemented those concerns as inflation continued to accelerate and central banks aggressively raised interest rates and unwound monetary stimulus programs in response. As a result, the likelihood of a global economic recession increased. At the same time, and somewhat unusually given softening economic conditions, most financial institutions are still understaffed and struggling to attract and retain talent.

Accordingly, the overall 2023 top risks were generally consistent with those noted last year. Concerns about the interest rate environment ranked as the top risk in both 2023 and 2022. Four of the top five risks from last year remained in the top five this year, although a few traded places. Surprisingly, the risk tied to inflation and economic conditions more broadly dropped from second to third, and the average score for this risk fell slightly as well.

There were a few other noteworthy results in this year's survey, including:

- Although global financial volatility and foreign exchange rates moved up the list (10th place this year vs. 21st last year), we were surprised this risk didn't rank even higher given the dramatic F/X fluctuations we've seen over the past 12 months and the impact those results have had on U.S. institutions with significant global operations, particularly in Europe.
- Other responses signalled growing wariness about economic conditions. For example, although still relatively low on the list at 20th place, liquidity and capital risks jumped 12 spots this year.
- Concerns about privacy and identity protection compliance jumped significantly in the ratings, moving from the 11th spot in 2022 to fourth place in 2023. However, the absolute score for this risk changed only slightly, making the move more a function of other risks dropping in priority than the industry significantly elevating its focus on privacy compliance this year. Interestingly, though, concerns about privacy significantly trumped security (ninth place last year and 11th place this year). We would have expected the opposite given the wide range of security threats and challenges the industry continues to face — from regulators' high and increasing focus on cyber resiliency to geopolitical tensions driving nation-state hacking, and high-profile wallet thefts from digital assets exchanges, among many other issues.

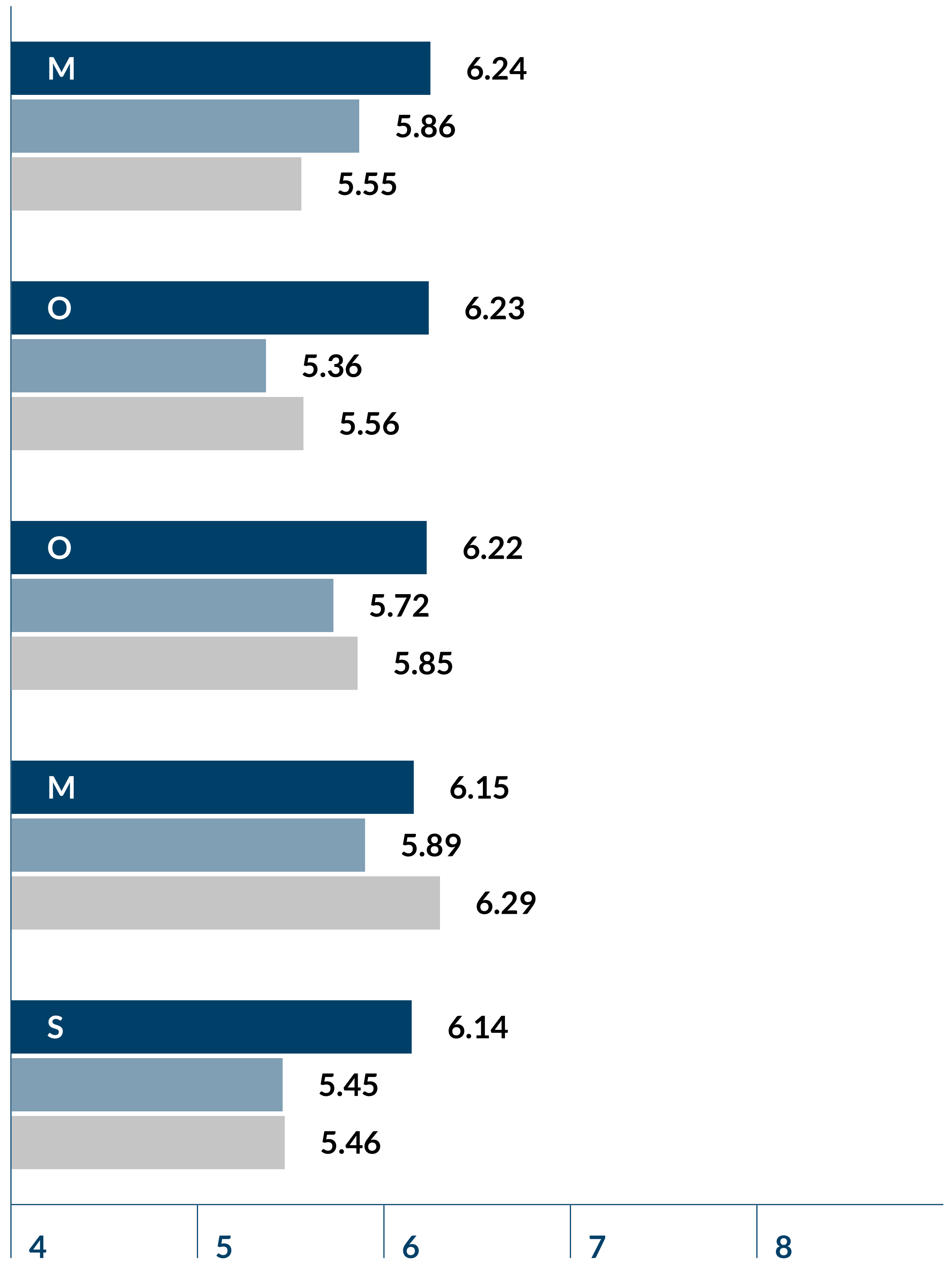
> *Risks related to the transition to hybrid work and ongoing increases in the cost of labour increased significantly year over year. We would expect this set of risks to decline by the time of our 2024 survey as the crypto implosion and layoffs and hiring freezes across the technology industry reduce a source of competition for FSI talent.*

- Another dominant theme throughout this year's results was the ongoing tightness of the labour market. The ability to attract and retain talent moved up two spots to No. 2. Access to IT talent and digital knowledge moved up five spots to No. 7. Risks related to the transition to hybrid work and ongoing increases in the cost of labour also increased significantly year over year. We would expect this set of risks to decline by the time of our 2024 survey as the crypto implosion and layoffs and hiring freezes across the technology industry reduce a source of competition for FSI talent. Meanwhile, headcount reductions in areas like mortgage lending and investment banking increase the supply of available candidates.
- Finally, this year's results confirmed that the financial services industry has moved on from COVID, at least in most parts of the world. Concerns about government mandates and restrictions, ability to protect the health and safety of employees, and the possibility that the pandemic would drive negative shifts in customer spending patterns all fell significantly, and collectively accounted for three of the eight lowest-rated risks in this year's survey.

The results for the 10-year risk outlook are very similar to last year's. The top five risks for 2032 include the adoption of digital technologies and the rapid speed of disruptive innovations as well as risks related to talent, data privacy and regulatory change, which also rank among the top five risks for 2023. Four of the top five 2032 risks — all but regulatory change — are rated at the "Significant Impact" level. Compared to the 2023 risk outlook, in which there are no risks rated at that level, the 2032 results suggest that board members and executives in the industry group see a riskier outlook for the next decade.

FIGURE 22A

Consumer Products and Services — 2023



Anticipated increases in labour costs may affect our opportunity to meet profitability targets	M	6.24	5.86	5.55
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	6.23	5.36	5.56
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	6.22	5.72	5.85
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	M	6.15	5.89	6.29
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation	S	6.14	5.45	5.46

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

FIGURE 22B

Consumer Products and Services — 2032

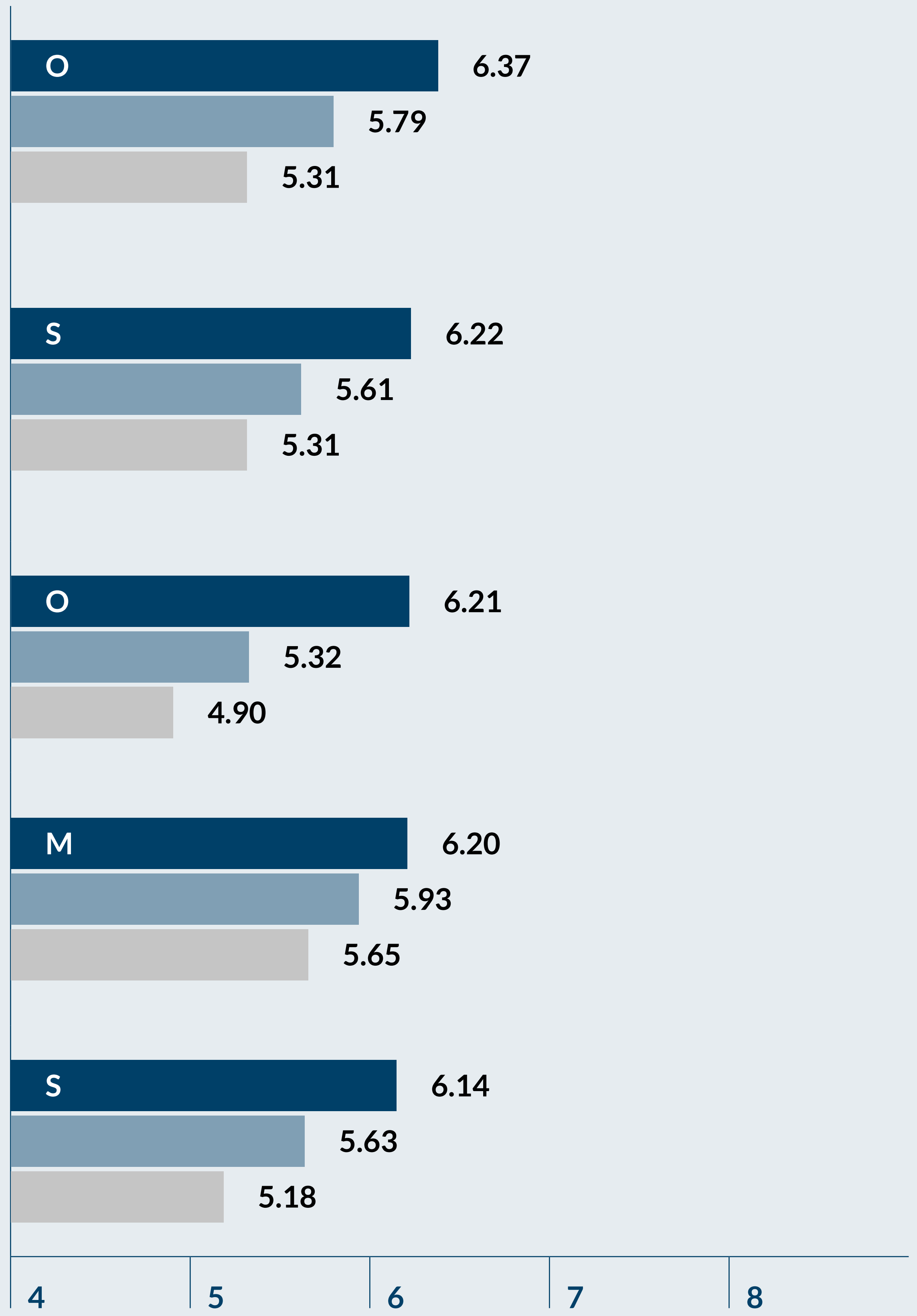
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation'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 organisation from making necessary adjustments to the business model and core operations on a timely basis

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 organisation 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

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



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

Commentary — Consumer Products and Services Industry Group

BY CAROL RAIMO
GLOBAL LEADER, CONSUMER PRODUCTS AND SERVICES INDUSTRY PRACTICE, PROTIVITI

Global economic uncertainty, inflation and supply chain disruptions are major headwinds facing the consumer packaged goods (CPG) and retail industry going into the new year. Inflation and cost of labour were major concerns last year, but the Russia-Ukraine crisis, which has put tremendous pressure on oil prices and shipping costs, and supply chain issues have pushed inflation to historic highs across many retail and consumer goods categories.

The industry group, which weathered significant market turmoil during the COVID-19 pandemic, is also contending with talent shortages that have increased labour costs, product availability challenges, difficulty sustaining customer loyalty and retention, and pressure to implement sustainability practices. These concerns are among the top 10 risks cited by CPG and retail industry executives.

Competing for customers

Since the pandemic, CPG and retail companies have struggled to keep pace with the dramatic shift to e-commerce and omnichannel sales. Consumer purchasing habits have changed significantly along with their expectations for service and brand loyalty. Even though the pandemic has mostly dissipated in much of the world, competition for customers has not let up.

As a result, many CPG and retail industry leaders are concerned that sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in existing customer bases. This is cited as the fifth-ranked risk issue for 2023.

Increased competition for customers means increased costs to service customer needs; for example, the number of retailers rolling out lucrative loyalty programs to attract consumers continues to grow, despite some challenges obtaining customer data needed to drive the programs. Loyalty programs are not only competitive differentiators, but also key drivers of revenue and profits for retailers, restaurants, hotels, airlines and many other businesses.

Of course, many retailers have gone digital with customer orders, including in-store, pick-up and delivery. With customer expectations at an all-time high, the ability to enable consumers to buy anything, anywhere, anytime, and have it available at their front door is a challenge every CPG and retail company must embrace to compete effectively for customers.

The supply chain game

Last year, CPG respondents rated the supply chain crisis as their foremost risk issue, above even market conditions related to the pandemic and pandemic-related government policies. The latest survey shows this trend isn't going away, as it was again rated the top risk by the combined CPG and retail group.

The cost of goods (i.e., inflation), the changing labour model, with its cost implications, and persistent labour shortages all contribute to the difficulty of moving goods through the supply chain to customers. In a recent Protiviti analysis on supply chain risks and their impact on the budgeting and forecasting process, 50% of senior executives across various industries reported that their companies are passing along higher supply chain costs to their customers. This approach clearly isn't sustainable as it could lead to customer experience and customer loyalty downfalls — even for companies at the helm of omnichannel.

Companies struggling with their supply chains can benefit from improving inventory management, such as using a greater number of smaller warehouses (micro-warehouses) for easier access to products without relying on long-distance shipping. It is critical for companies to have enough inventory to respond to consumer demand without carrying excess inventory and increased costs.

Other crucial steps include understanding critical end-to-end risk exposures in supply chain networks, creating better alignment and integration between supply chain and financial planning operations, and making improvements to demand forecasting.

Cost and management of people

The labour dynamic in the CPG and retail industry is complicated, with many competing trends. Industry respondents identify labour costs as the second most critical risk for 2023. The respondents said they are concerned about potential increases in labour costs affecting their organisations' opportunity to meet profitability targets. At the same time, the survey respondents point to succession challenges and the ability to attract and retain top talent as another major threat to meeting operational targets in 2023 — this is the seventh-ranked risk.

Clearly, with rising inflation and the prospect of a recession, many large companies are taking a cautionary approach with hiring. Amazon, for instance, recently announced it will reduce its workforce by as many as 10,000 people, according to some reports, as it prepares for a slower growth period.[6]

While retailers are retrenching as online shopping slows and consumers return to physical stores, some smaller companies that have struggled with hiring in recent years are rolling out perks to attract employees, especially seasonal holiday workers. Rising inflation and the prospect of a recession mean more companies are likely to be cautious with hiring and will need to prepare to do more with fewer workers.

This is a good time for companies to develop a differentiated employee experience and revisit their talent strategy to ensure it aligns with their strategic business objectives. A reactive talent strategy that focuses primarily on filling open positions can no longer suffice. While pay is important, a differentiated employee experience will help with attraction and retention of talent. Being strategic about talent and costs will be critical to avoid losing valuable people to the competition.

Other top risks

Among the top 10 risks in 2023, CPG and retail executives cited the impact of social issues and priorities surrounding DEI initiatives on their ability to attract and retain talent; resistance to change in culture; third-party risks; and geopolitical shifts, regional conflicts, and instability in governmental regimes or expansion of global terrorism.

Asked to identify top risk issues they expect over the next decade, CPG and retail respondents cited succession challenges and the ability to attract and retain top talent, the speed of disruptive innovations, sustaining customer loyalty and retention, and supply chain concerns.

Hospitality industry

Having shaken off the crippling effects of the pandemic, and with global travel and tourism continuing to rebound, the hospitality industry is expecting substantial growth in 2023, led by a strong appetite from vacationers and business travellers to spend even in the face of rising inflation. At the same time, hospitality companies are bracing for a return of more traditional types of risks as well as newer challenges stemming from changes in consumer behaviour and expectations.

Whether it's enhancing digitisation and contactless services, improving ESG programs, or creating a collaborative and culture-driven workplace for employees, hospitality companies understand the need to evolve business models to adapt to the changing environment.

In the survey, hospitality executives identify resistance to change within their organisation, challenges associated with

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[6] "Amazon confirms it has begun laying off employees," CNN, November 16, 2022: www.cnn.com/2022/11/16/tech/amazon-layoffs/index.html.

attracting and retaining talent, and the threat of catastrophic natural disasters and weather phenomena as their top three risks for 2023. The fourth-ranked risk also concerns culture, specifically the fear that their organisation's culture may not sufficiently encourage the “timely identification and escalation of risk issues and market opportunities.”

Like the rest of the service industry, hospitality companies are playing catch-up after two years of turmoil and not being able to invest in talent and technology. The move to digital, for instance, requires continued investments in training and hiring people with new skillsets that are difficult to find in the current labour market. Many employees who were laid off or furloughed have not returned, resulting in the need to train inexperienced workers to fill roles. The second-ranked risk for hospitality organisations underscores this concern about not having the right people to achieve operational targets or satisfy desired succession planning.

If they haven’t already, hospitality companies should consider automation to solve some of the challenges associated with the tight labour markets. At the same time, they need to reassure existing employees that they will be the recipients of more meaningful work and not pink slips while incorporating the technology in a manner that optimises the supply chain.

Increasing commitment to ESG initiatives is another priority for hospitality companies. Whether addressing natural catastrophes by retrofitting buildings or reducing carbon footprints by limiting water usage and encouraging renewable energy, many major hospitality companies have committed to sustainability targets. For instance, according to the UK-based Sustainability Hospitality Alliance, which consists of large and small hotel companies worldwide, its members have collectively committed to reduce carbon emissions by 66% per room by 2030 and by 90% per room by 2050.[7]

More than ever, consumers care deeply about how companies stand on social, sustainability and regulatory matters, which means that leading hospitality brands need to reexamine their purpose and value and make decisions that resonate with target consumers. ESG initiatives should be viewed as future-proofing the organisation; not merely a task of reporting the status quo or checking a box, but a mission to change outcomes.

Airline industry

While 2022 demand has already eclipsed pre-pandemic levels, several lingering effects remain and continue to threaten the ability of airlines to meet operational targets. Among the biggest threats are labour issues and disruptions impacting the reliability of airline flight schedules.

At the height of the pandemic, airlines offered early retirement packages to pilots. With air travel now at record levels, airlines are experiencing a highly competitive environment as they seek to replace the pilots who took early retirement, anticipate the departure of pilots approaching mandatory retirement age, and work to fill roles at regional operators to replace pilots who have departed for larger airlines. Other significant challenges impacting the airline workforce include travel benefits for employees that are less attractive due to limited seat availability, resulting in fewer open seats for non-revenue travel. That, combined with a tight labour environment and heavy competition for IT, finance, accounting and other back-office positions, has created significant concerns about talent acquisition. It is no surprise that airline executives identify challenges associated with the overall work environment and shifting labour model as their third-ranked risk for 2023.

Companies’ ability to manage an unexpected crisis impacting their operations or reputation is ranked first. In general, airlines are most concerned about any event

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[7] Climate action, Sustainability Hospitality Alliance: https://sustainablehospitalityalliance.org/our-work/climate-action/.

that could result in an extended ground stoppage, as revenue is not recoverable. Accordingly, airlines likely view a ransomware event impacting flight operations as more impactful than a breach of personally identifiable information. While both result in significant reputational damage, the inability to generate revenue is top-of-mind for airline executives and boards.

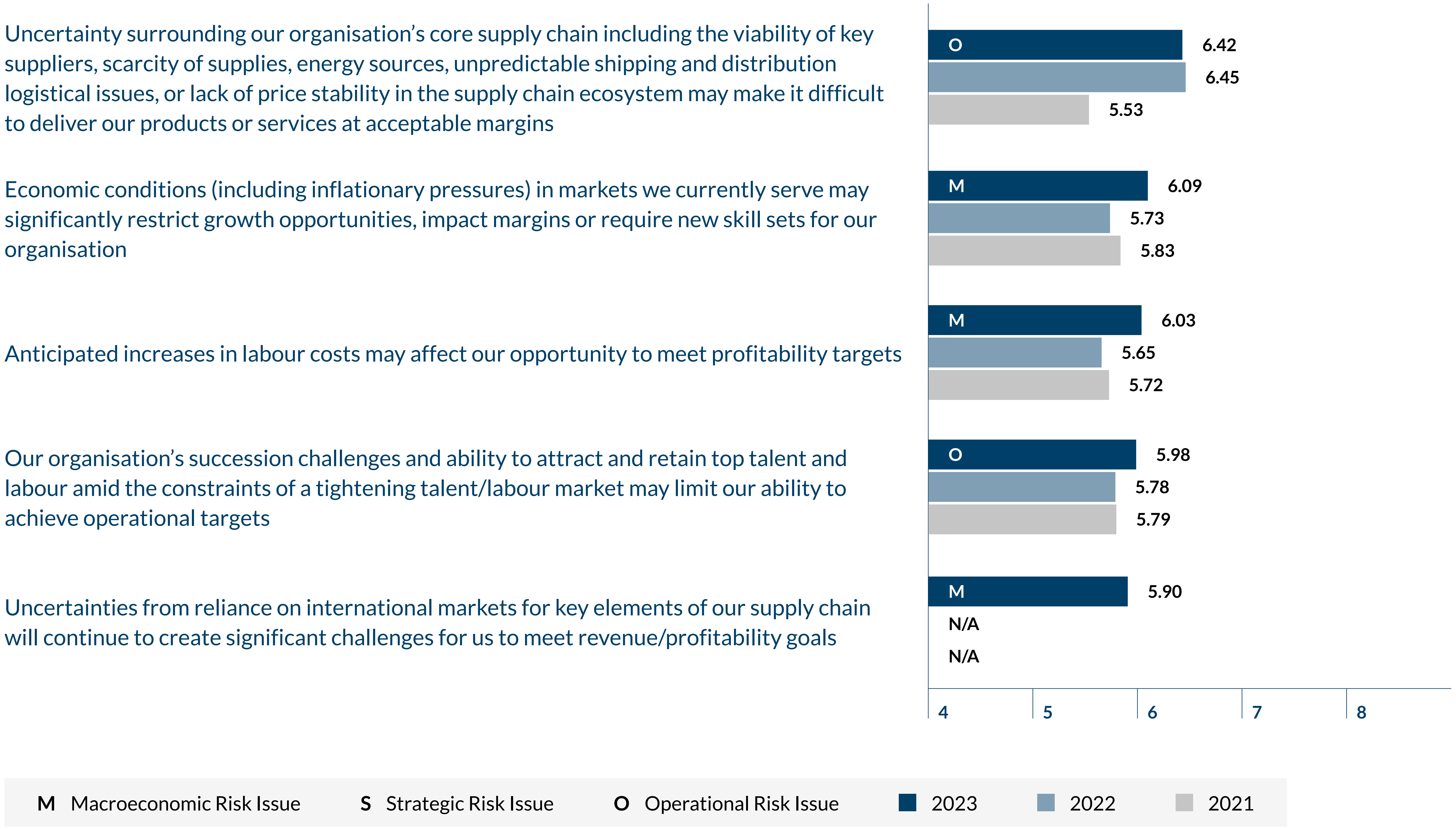
Survey respondents from the airline industry also highlighted catastrophic natural disasters and weather events as top concerns. While they deal with weather events daily, airlines are getting better about integrating forecasting technology and predictive models to minimise the concentration of aircraft in catastrophe-affected areas that threaten to take aircraft out of service.

Several major airlines have also committed to the goal of achieving net-zero emissions by 2050. In both the United States and Europe, regulators are proposing rules that will require airlines to provide greater transparency on greenhouse gas emissions, including certifying carbon removal. Some in the industry are receptive to the idea but want to see a more “deliberate, incremental approach” to implementing the new rules. Also, several big airlines are investing in emerging technologies that could replace higher-emission aircraft.

Overall, more than half of the top 10 risks identified by airline respondents are related to people and culture — risks they fear could impact their operations and ability to deliver quality services and products to customers. Cost of fuel and other services, such as cabin cleaning and food vendors, have increased significantly. Higher fares indicate airlines are looking to pass this cost on to customers, but whether the strategy will be successful in the longer term is another issue that respondents identify as a top risk they may need to contend with in 2023.

FIGURE 23A

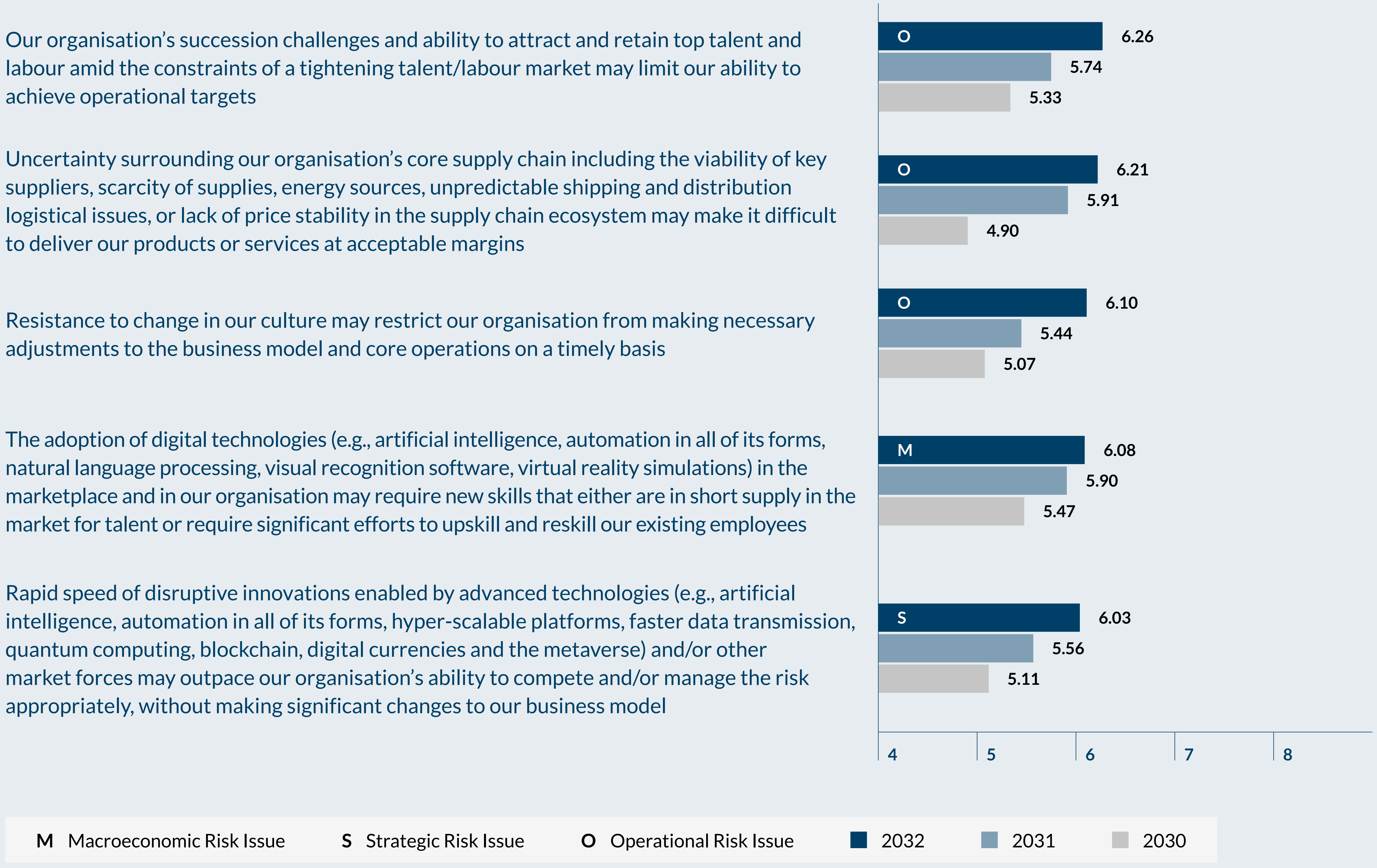
Manufacturing and Distribution — 2023



Uncertainty surrounding our organisation'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	O	6.42	6.45	5.53
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	M	6.09	5.73	5.83
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	M	6.03	5.65	5.72
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.98	5.78	5.79
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	M	5.90	N/A	N/A

FIGURE 23B

Manufacturing and Distribution — 2032



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

Uncertainty surrounding our organisation’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

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

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 organisation 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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model

Commentary — Manufacturing and Distribution Industry Group

BY SHARON LINDSTROM
GLOBAL LEADER, MANUFACTURING AND DISTRIBUTION INDUSTRY PRACTICE, PROTIVITI

In assessing the global risk landscape for manufacturing and distribution organisations in 2023 and 2032, familiar themes emerge: global supply chain challenges; the economy; and labour costs coupled with succession challenges and the ability to attract and retain top talent. Other issues, though not ranked among the top five risk concerns for these organisations, still represent significant priorities, such as organisational culture, operating successfully amid shifts to hybrid work environments or remote work arrangements, and resistance to change in these and other areas that could impact the organisation's ability to achieve its long-term objectives. It's also important to note that most of these risk issues fall under the umbrella of ongoing innovation and transformation efforts as manufacturing and distribution organisations continue to go through the growing pains of Industry 4.0.

Overview of top risk issues in 2023

Organisations in the Manufacturing and Distribution industry group reflect trends in their assessment of the risk landscape for 2023 similar to that of most other organisations worldwide. They view the risk landscape to be riskier for the next 12 months compared with their perceptions in last year's survey for 2022. Ratings for three of the top five risk issues for the industry group have increased year-over-year, with the fifth-ranked risk issue being new to this year's survey: uncertainties from reliance on international markets for key elements of the supply chain creating significant challenges. And within the top 10 risks, just two show a year-over-year decline: uncertainty surrounding the core supply chain and concerns about expectations among the workforce to work remotely impacting the organisation's ability to retain talent. In addition, whereas just one risk issue ranked at the "Significant Impact" level in 2022, this year there are three risk issues at that level, with the fourth falling just below 6.0.

Not surprisingly, supply chain concerns continue to represent the top risk issues for board members and executives in the industry group. In fact, two supply chain-related risk issues in the survey both land in the top five for 2023. Uncertainties surrounding the organisation's core supply chain making it difficult to deliver products or services at acceptable margins is the top risk issue, similar to 2022, with uncertainties from reliance on international markets for key elements of the supply chain (as noted earlier, a new risk issue to this year's survey) also in the top five.

Pandemic-driven supply chain issues have been well documented. While from a global, cross-industry perspective, some supply chain challenges are slowly becoming less intensive, critical short- and long-term challenges for manufacturing and distribution organisations remain, from access to critical raw materials to often fragile logistics. These issues directly impact customers of manufacturing and distribution organisations and, as a result, the bottom line.

At the same time, whereas two years ago the focus was on pandemic-related supply chain issues, today the focus is more on effects on the supply chain resulting from geopolitical issues, including but not limited to Russia's war on Ukraine and China-U.S. relations. These developments and the uncertainty they create are contributing to the staying power of supply chain risk as the top concern for this industry group. Moreover, as we discuss in more detail below, uncertainties surrounding the organisation's core supply chain still ranks as the second-highest-rated risk issue for manufacturing and distribution organisations looking a decade out to 2032.

Building resiliency and innovation into manufacturing and distribution supply chains by leveraging re-shore and near-shore decisions and enabling data transparency across the supply chain will help move these organisations from reactive to proactive by adopting a stronger risk mindset with regard to their supply chain management. Many manufacturing and distribution organisations continue to grapple with how they manage their supply chains, perceiving and operating it as a cost centre — i.e., cost of goods sold — as the dominant measure driving decisions and behaviours. However, manufacturing and distribution organisations, more than ever, will benefit from a more holistic approach to managing their supply chains. The geopolitical events cited earlier have brought into clear focus the shortcomings in fragility of cost-focused supply chain risk management models and the need to restructure them to become more flexible, responsive and reliable. Manufacturing and distribution companies that successfully construct and implement such a holistic supply chain model will afford themselves the opportunity to maintain business operations and customer satisfaction in the event of future business interruptions, both large and small.

A final note regarding the focus on supply chain costs: Keep in mind that when disruptions strike, a just-in-time inventory strategy fails to provide an accurate tabulation of the cost of goods sold. It does not account for expenses related to business continuity management, logistics adjustments, delays and unhappy customers, and long-term damage to brand reputation and the customer experience. It also tends to neglect the significant value derived from designing and operating more reliable and resilient supply chains. Indeed, a focus on resiliency and optimisation can pivot the view of supply chain from a cost centre to a revenue driver.

Overall economic conditions, including ongoing inflationary pressures, represent the second-highest-ranked risk issue for the industry group, moving into the "Significant Impact" risk category for 2023. Given the ongoing concerns regarding inflation and potential recessionary trends, which directly impact costs for materials and transportation, leadership within manufacturing and distribution organisations are keeping a close eye on the markets and potential impact on their organisations and global supply chains in the coming year.

Labour, talent and skills also are critical areas of concern for manufacturing and distribution organisations. To no surprise, anticipated increases in labour costs jumped significantly in score year-over-year, after seeing a slight drop between 2021 and 2022. This risk jumped from ranking seventh in our 2022 study to third this year and is rated at the "Significant Impact" level. Increases in wages resulting from the so-called Great Resignation, together with the current inflationary environment, have had a major impact on manufacturing and distribution organisations' margin management.

> *Given the ongoing concerns regarding inflation and potential recessionary trends, which directly impact costs for materials and transportation, leadership within manufacturing and distribution organisations are keeping a close eye on the markets and potential impact on their organisations and global supply chains in the coming year.*

Closely related to risks regarding the cost of labour, organisational succession challenges and the ability to attract and retain top talent continues to be a concern for these organisations. It has consistently ranked in the top five list of risks over the past several years, due in great part to the historical labour and skills shortages across the Manufacturing and Distribution industry group. Factoring in the upskill in talent needed for manufacturing and distribution organisations to succeed long-term in Industry 4.0, the so-called fourth Industrial Revolution, as well as the ongoing challenge of attracting top talent to manufacturing and distribution locations often situated away from more desirable urban centres, it is very likely this risk issue will persist in the industry group for the foreseeable future. Underscoring this point, as noted below, challenges with the ability to attract and retain top talent is the top-ranked risk issue for the industry group in 2032.

A number of critical risk issues fall just below the top five but remain highly relevant, one of which is the risk of not being sufficiently resilient or agile to manage an unexpected crisis. Manufacturing and distribution organisations have experienced successive waves of uncertainty over the last several years. While these events have elevated organisational resiliency, they also have fostered an environment of constant change that has created fatigue among management and employees alike. Being “agile” is not just related to the IT organisation and environment, but also whether the organisation is truly “business agile” as a way to respond to significant events proactively versus reactively.

It is interesting to note that three of the top 10 risk issues for manufacturing and distribution organisations relate specifically to culture. The world has shifted. As a result, board members and leadership within these organisations are seeking to understand whether their culture and people are shifting with it. Such changes are not new in the industry group. Since evolving from operating in a farming economy to an industrial machine economy, these companies have had to reinvent their business models and cultures historically. They now face greater demand for hybrid and remote work models, emerging technologies (including AI and machine learning), ESG and DEI programs, and other initiatives that directly affect the organisation’s culture.

Overview of top risk issues in 2032

Interestingly, the 10-year outlook in this year’s survey is significantly riskier than this same outlook from last year’s study. Whereas in the 2031 view from last year’s survey there were no risk issues rated at the “Significant Impact” level, all of the top five risks for 2032 are ranked at this level.

In comparison with perceptions for 2023, there are some similar themes in the risk outlook for a decade out. Familiar risks including succession challenges and the ability to attract and retain top talent, supply chain challenges, and resistance to change in the culture are perceived to be significant concerns for 2032.

The notable difference is seen in two of the top five risk issues that relate to technology: specifically, the adoption of digital technologies requiring new skills, and the rapid speed of disruptive innovations enabled by advanced technologies outpacing the organisation’s ability to compete. Whereas these two risk issues are ranked 11th and 22nd, respectively, for 2023, they land in the top five for 2032. They also appeared in the top five in last year’s study, though we see significant jumps in risk scores in this year’s study. This is a strong indicator that while innovation, transformation and the adoption of digital technologies may not be as much of a near-term concern for boards and C-suite leadership within manufacturing and distribution organisations, they do represent a significant concern over the next decade from the standpoint of ensuring the long-term success of their organisations. At the same time, leaders within manufacturing and distribution organisations likely have concerns about managing the technical debt that has accumulated over time from retaining and maintaining legacy systems. These systems inhibit innovation and growth initiatives to implement new applications, cloud-based systems and a host of emerging technologies.

FIGURE 24A

Technology, Media and Telecommunications — 2023

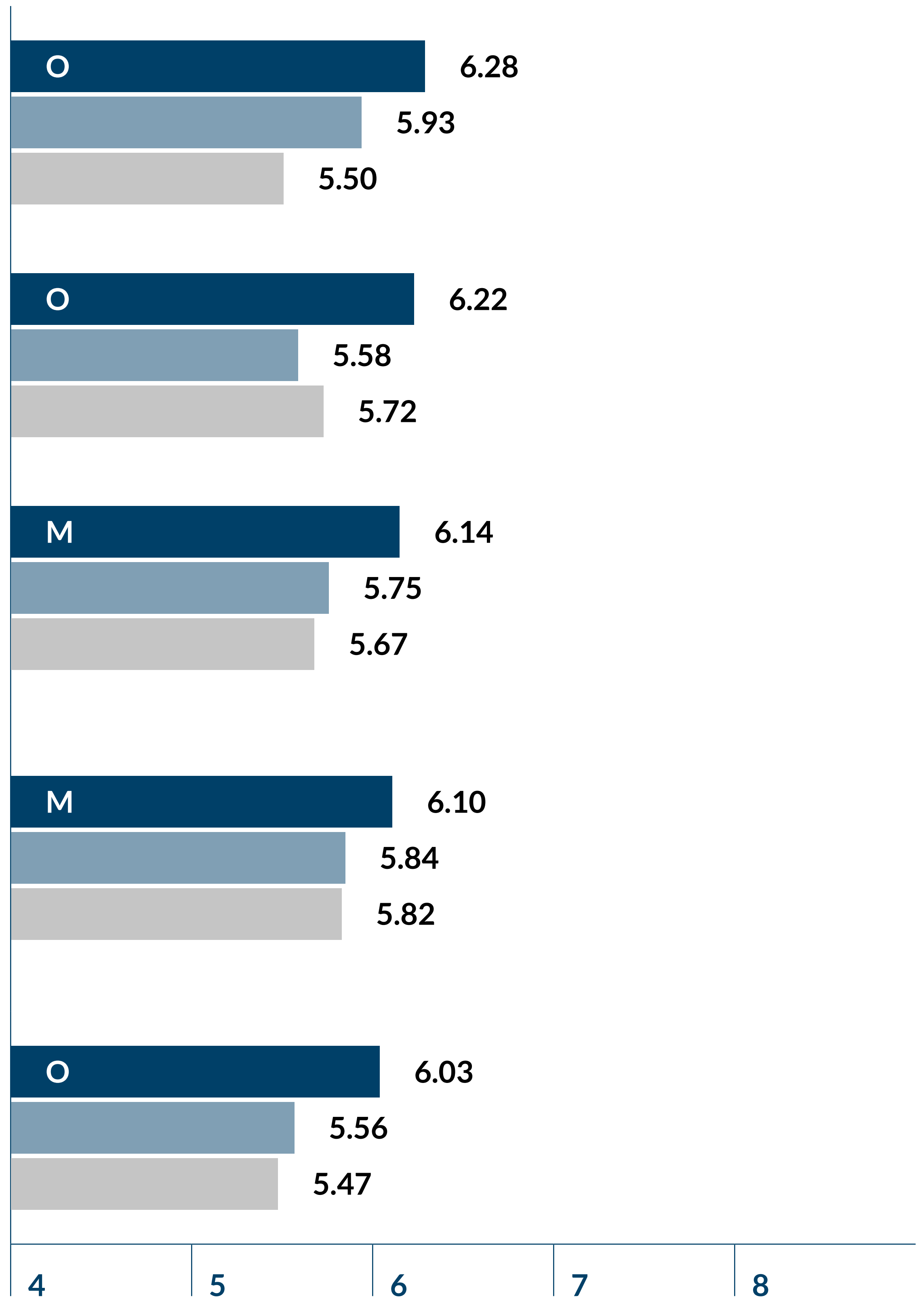
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

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

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 organisation 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

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



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

Technology, Media and Telecommunications — 2032

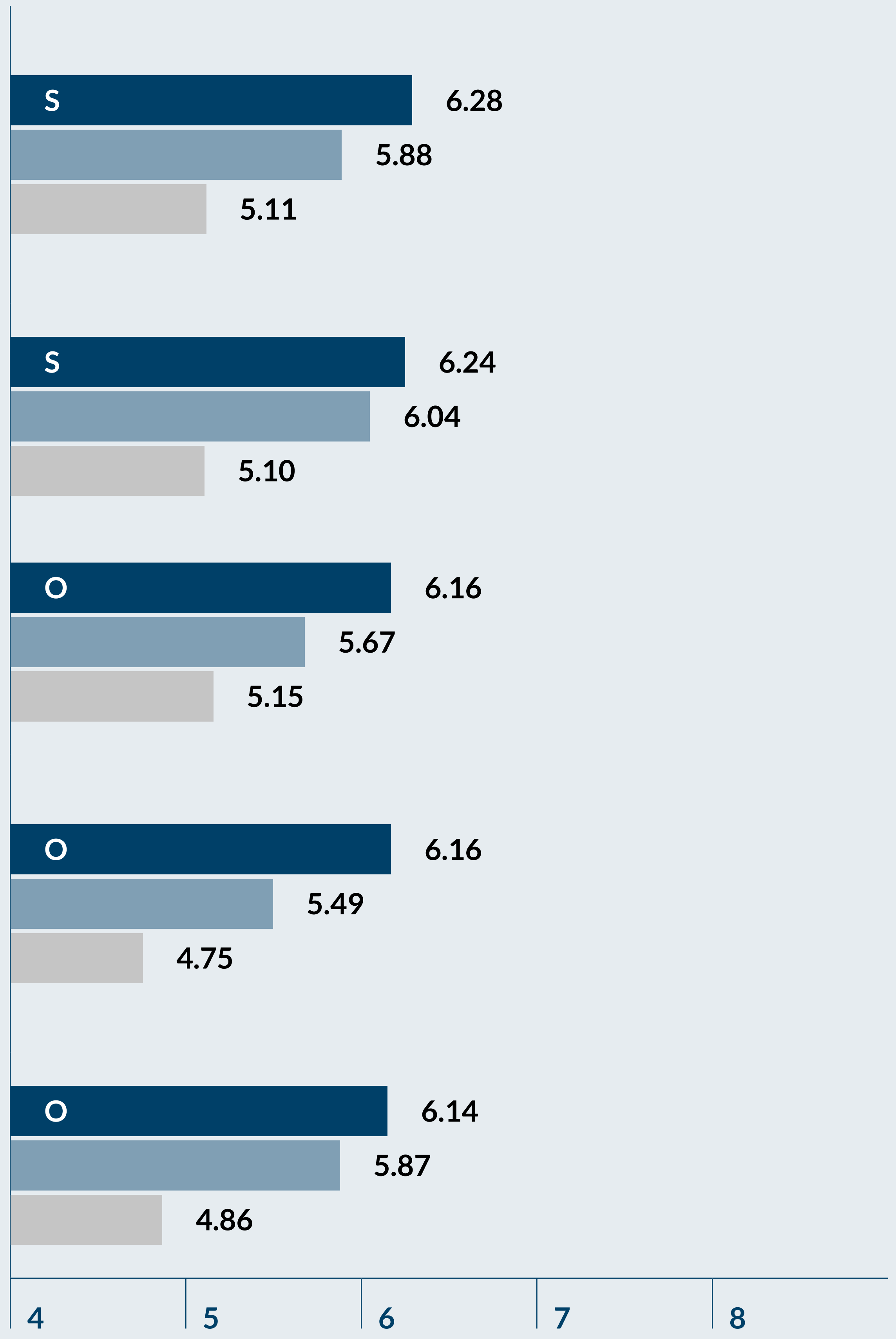
Rapid speed of disruptive innovations enabled by advanced technologies (e.g., artificial intelligence, automation in all of its forms, hyper-scalable platforms, faster data transmission, quantum computing, blockchain, digital currencies and the metaverse) and/or other market forces may outpace our organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

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

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

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



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

Commentary — Technology, Media and Telecommunications Industry Group

BY GORDON TUCKER
GLOBAL LEADER, TECHNOLOGY, MEDIA AND TELECOMMUNICATIONS INDUSTRY PRACTICE, PROTIVITI

It has been an exigent year for the technology, media and telecommunications (TMT) industry. Throughout 2022, many companies continued transformations accelerated during the COVID-19 pandemic, even as they faced an intensifying regulatory environment, geopolitical turmoil and supply chain disruptions.

Heading into the new year, companies again are adjusting for more uncertainty and headwinds. The biggest challenges facing TMT companies include difficulty retaining a strong workforce, including senior management; fending off economic headwinds, particularly inflation; ensuring data security and privacy compliance; and finding people with the right skillsets to meet the rapid pace of digital transformation. Additionally, many TMT executives are concerned about resistance to change within their culture impacting their business model and core operations.

These concerns represent the top five risks identified by TMT respondents in this year's survey. The results indicate that the TMT industry has shaken off risks related to the pandemic, but what now prevails in board and C-suite discussions are concerns related to people management, which occupy two of the top 10 risks for the industry group.

The "people" problem

The TMT industry has a "people problem" — one that is complicated by the global economic downturn, disruptive and fast-paced digital innovation, as well as cultural change. The survey results indicate that a lack of skilled talent available for hire along with challenges retaining current talent, including at the highest ranks of the organisation, have been a growing concern in the last five years.

Last year, for instance, after not making the top five list of key risks the prior year, the talent shortage made a dramatic appearance as the second-ranked risk concern, upstaged only by restrictive regulations related to the pandemic. In the latest survey, succession challenges and the ability to attract and retain top talent sits at the top of the list of risks, though it comes at an interesting time for the industry. In recent months, a number of TMT organisations have announced layoffs and hiring freezes, citing inflation, rising cost of wages and benefits, and a need to eliminate less value-added resources to focus on profitability.

The changing labour model spurred by the pandemic likely has something to do with the talent challenges board members and executives in the industry see. The shift to remote and virtual work models during the pandemic reduced geographic barriers to talent recruitment. As an example, top technology talent, such as engineers, programmers, developers and sales staff, can be recruited from anywhere in the world and do not need to live in proximity to traditional tech hubs like San Francisco, New York and Seattle. This ease with which employees and senior management are able to move between jobs appears to be driving some of the people management challenges that many TMT companies now face.

Going into 2023, it is important for TMT leaders to understand the multiple factors involved with retaining talent during a potential recession. They need to consider these key questions: How do you determine the skills/experience your organisation needs during and after the recession? How well do you communicate to your employees amid uncertain times, including during potential downsizing? What type of employee experience are you creating for the people that you retain?

Compliance concerns

Ensuring data privacy and compliance with growing identity protection expectations and regulations is the second-ranked risk issue identified by TMT respondents in this year's survey. This risk underscores the growing pressure TMT companies are under to bolster their organisations' compliance capabilities, refresh privacy programs, and identify and mitigate increased areas of risk brought on by changes to business processes, adoption of emerging technologies, and evolving business operational models. There are also reputational and legal concerns associated with this risk, as well as major cost implications. The necessary alterations require significant resources to restructure how organisations collect, store, share and use data to run their business.

This top risk concern is only going to worsen, as regulators globally introduce measures that will push organisations to identify and remediate potential gaps in policies and processes related to data privacy. In the United States, for example, a new federal privacy legislation, the American Data Privacy and Protection Act, is making its way through Congress and has bipartisan support.[8]

There is also the stringent new Trans-Atlantic Data Privacy framework, which the United States and the European Union (EU) agreed to in 2022, that addresses data privacy and protection of EU citizens' data.[9] The Digital Services Act, which the European Council signed into law in September 2022, aims to protect the digital space against the spread of illegal content and carries significant financial penalties and enforcement actions against infringing companies.[10] The EU's Artificial Intelligence Act is another one; deemed the first legislation globally that aims to regulate the use of AI across all sectors, it proposes state-of-the-art security and privacy-preserving requirements for companies developing high-risk AI systems.[11]

Digital disruptions

Many TMT leaders fear their organisations may not have the right skills to take advantage of emerging digital technologies, especially during this period of economic instability, high inflation and talent shortages.

This explains the fourth-ranked risk for 2023, which concerns the adoption of digital technologies (e.g., AI, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and within organisations. Keeping up with digital disruption requires assembling the right talent, putting in significant efforts to upskill and reskill existing employees, and focusing on change management.

Other risk issues are entangled here, as well. For example, in the event of a recession, companies are likely to cut research and development budgets, and startups building emerging technologies will struggle to raise venture capital. Organisations with deeper pockets may invest in struggling startups by acquiring the business or picking off their talent. Either way, there would be disruption all around, even for the buyers.

Culture challenges

The scenarios cited above also entail big risks for companies with deeper pockets. Conflicting corporate cultures is one of the major reasons many merger and acquisition transactions fail or do not measure up to expectations. It is no surprise that TMT executives identify resistance to change in the organisation's culture as the fifth-ranked risk issue. The concern here is that such resistance would restrict organisations from making necessary adjustments to the business model and core operations on a timely basis.

Other top 10 risks

Outside the top five risks, TMT executives cited resilience amid unexpected crises, volatility in global financial markets and currency, third-party risks, and supply chain disruptions among their top 10 risks.

Asked to identify risks they expect over the next decade, the TMT respondents cited the rapid speed of disruptive innovations enabled by advanced technologies, the competitive threat from substitute products and services, data privacy and compliance expectations and regulations, and resistance to change in the organisation's culture. Interestingly, the top-ranked risk issue for 2023, succession challenges and talent retention, falls to fifth in TMT leaders' 10-year outlook.

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[8] American Date Privacy and Protection Act, Congress.gov: www.congress.gov/bill/117th-congress/house-bill/8152.

[9] "U.S. and EU Agree in Principle on New Trans-Atlantic Data Privacy Framework," *The National Law Review*, March 28, 2022: www.natlawreview.com/article/us-and-eu-agree-principle-new-trans-atlantic-data-privacy-framework.

[10] *The Global Consequences of Europe's New Digital Regulatory Regime*, Protiviti: www.protiviti.com/us-en/whitepaper/global-consequences-europes-new-digital-regulatory-regime.

[11] Artificial Intelligence Act, EUR-Lex: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206.

FIGURE 25A

Healthcare — 2023

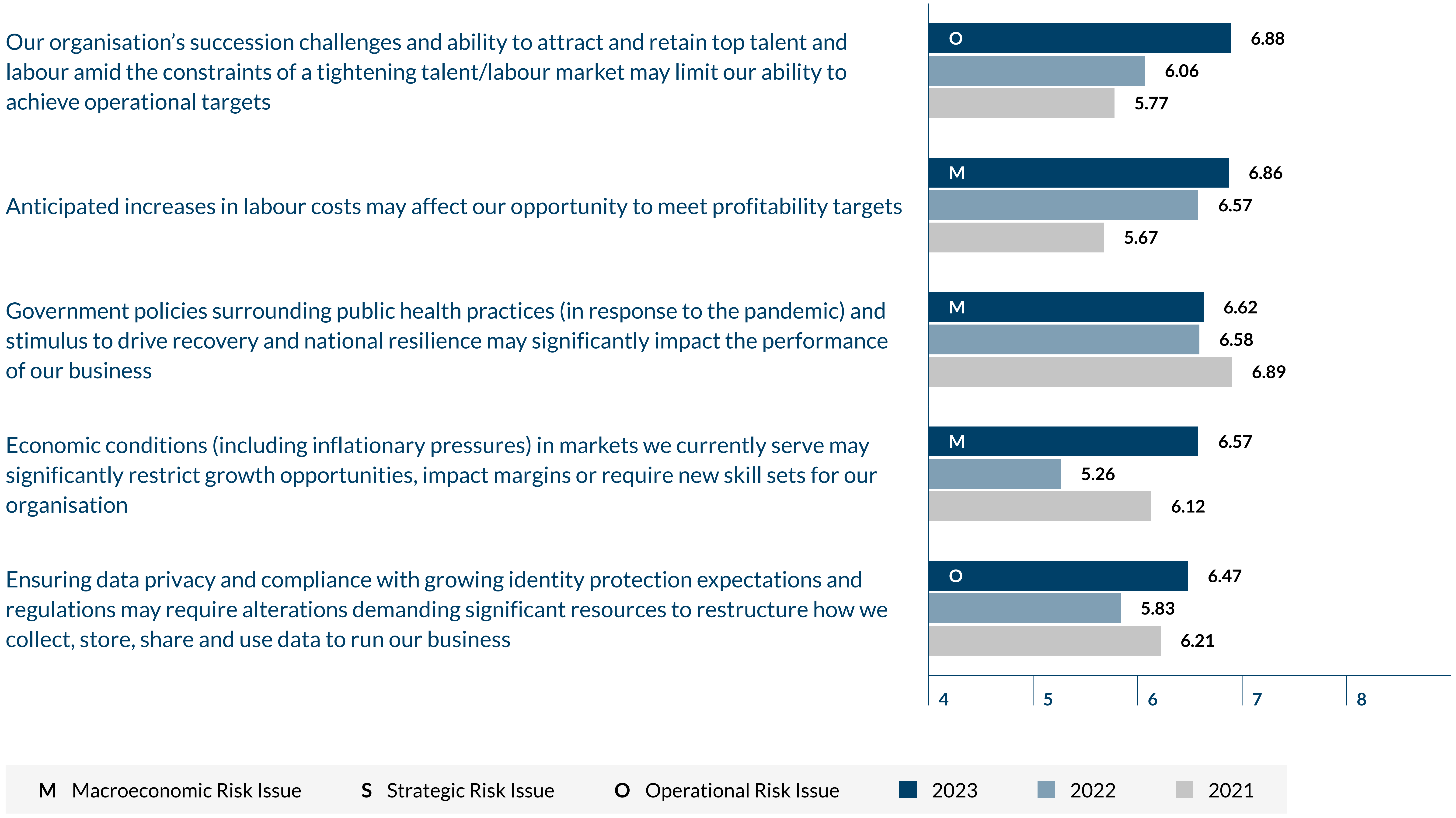


FIGURE 25B

Healthcare — 2032

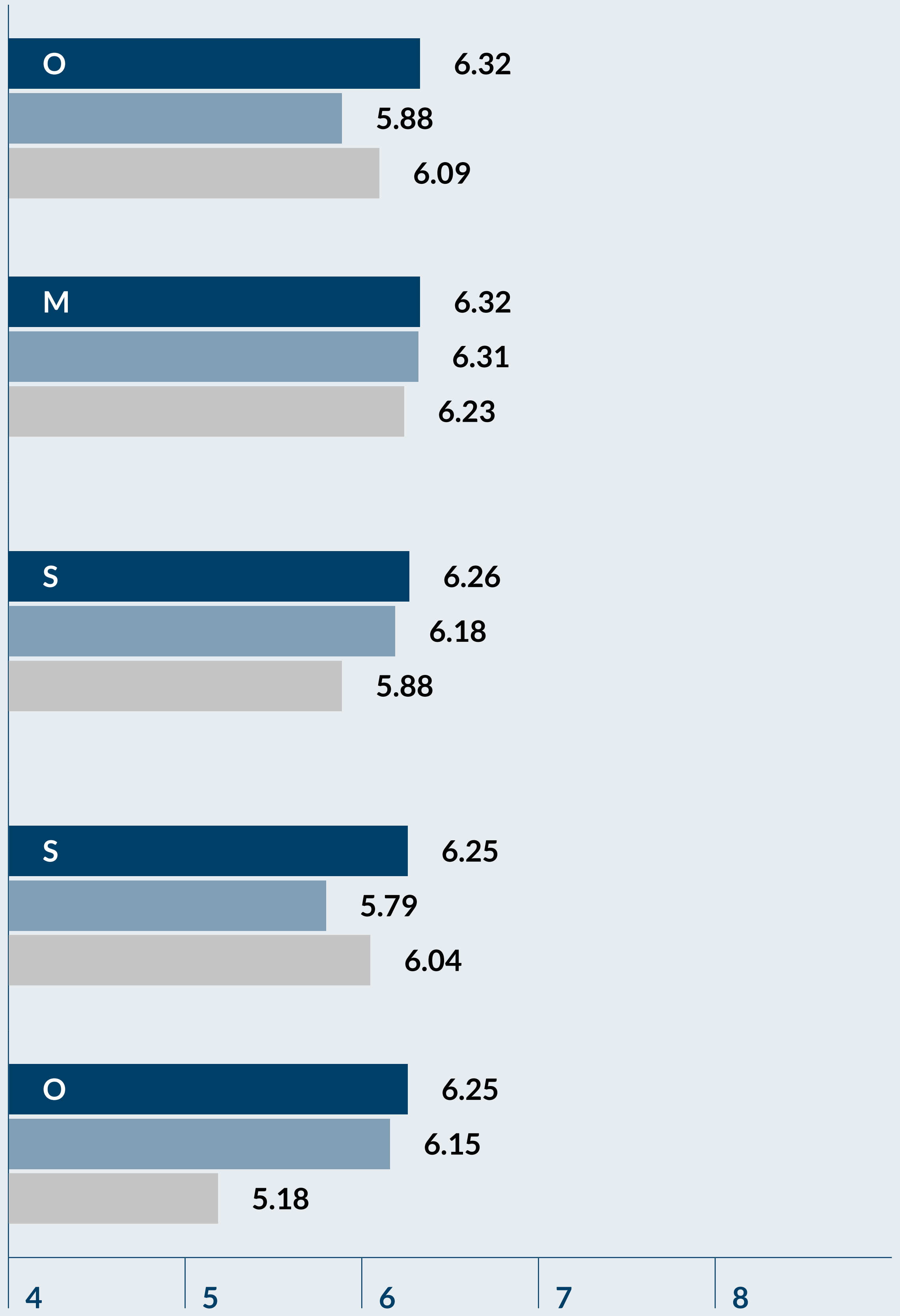
Ensuring data privacy and compliance with growing identity protection expectations and regulations may require alterations demanding significant resources to restructure how we collect, store, share and use data to run our business

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 organisation 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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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



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

Commentary — Healthcare Industry Group

BY RICHARD WILLIAMS
GLOBAL LEADER, HEALTHCARE INDUSTRY PRACTICE, PROTIVITI

People and talent (including succession challenges and the cost of labour) dominate the top risk issues for healthcare organisations, but competing priorities continue to test boards and executive leadership throughout the industry. Uncertain economic conditions fuelled by inflationary pressures and potential recessionary trends are raising new questions about the outlook for the next 12 months. Not surprisingly, while risks associated with the global pandemic, including government policies and stimulus programs, have dropped in significance in most industries, they continue to be of great concern for healthcare organisations. Rounding out the list of top risks are the ever-present challenges of cyber attacks, data privacy, security and identity protection.

Following is a rundown of the top risk issues for healthcare organisations, including an analysis of the underlying factors driving these concerns.

Succession challenges and the ability to attract and retain talent are top of mind

Succession challenges and the ability to attract and retain top talent amid the constraint of a tightening labour market is the top risk for healthcare organisations in this year's survey. This is a pervasive challenge that has impacted the healthcare industry for many years, but the worldwide public health emergency (PHE) brought on by COVID-19 has exacerbated the issue for healthcare organisation leaders. Throughout the industry, the largest staffing concern and pain point over the last few years has been clinical staff retention. For example, according to the 2022 Nursing Solutions, Inc. *National Health Care Retention & RN Staffing Report*, U.S. hospitals are experiencing a record 17% vacancy rate for nurses, up 7.1 points from 2021.[12] In the past five years, the average U.S. hospital turned over 95% of their registered nurses (RN) workforce and is estimated to have lost approximately $7 million in 2021 due to turnover alone.[13] This increased turnover is a result of burnout, competition and consolidation. This troubling trend does not impact just the bottom line — it also can diminish the accessibility and quality of patient care.

Similar staffing challenges are found around the world. The World Health Organisation (WHO) reports that nine out of 10 nurses in Europe have declared an intention to leave their jobs. Meanwhile, 40% of medical doctors are near retirement age in one third of European and central Asian countries, which continue to face substantial gaps and shortages as ageing and burnout are contributing to the increasing shortage of healthcare workers.[14] While the WHO projects a decline in the estimated global health workforce shortage to 10 million in 2030, compared with a 15 million workforce shortage the WHO projected for 2020, the International Council of Nurses notes that the pandemic is driving up demand for nurses, particularly in destination countries, and will drive increased outflow of nurses from low- and middle-income countries.[15]

Innovative strategies are needed to change the course of this trend and meet current and future staffing demand through different approaches to recruit, hire, train, retain and support the workforce. Strategies should be developed and adopted across a variety of areas including a healthy work environment; diversity, equity and inclusion (DEI); work schedule flexibility; stress injury continuum;

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[12] *2022 NSI Natinal Health Care Retention & RN Staffing Report*, NSI Nursing Solutions, Inc., March 2022: www.nsinursingsolutions.com/Documents/Library/NSI_National_Health_Care_Retention_Report.pdf.

[13] Ibid.

[14] *Ticking timebomb: Without immediate action, health and care workforce gaps in the European Region could spell disaster*, World Health Organisation, September 14, 2022: www.who.int/europe/news/item/14-09-2022-ticking-timebomb--without-immediate-action--health-and-care-workforce-gaps-in-the-european-region-could-spell-disaster.

[15] *ICN Report, 75th World Health Assembly*, July 2022: https://indd.adobe.com/view/11a5cd21-9e3a-4525-a069-8f24b43b67fd.

innovative care delivery models; and total compensation.[16] The industry must continue to identify opportunities to focus on preparedness and protect both the quality of care and the bottom line.

Higher labour costs continue to increase the difficulty of achieving profitability targets

For the second consecutive year, anticipated increases in labour costs and how this may affect opportunities to achieve profitability targets ranks as the number two risk in the survey. Labour costs already account for a sizable portion of most healthcare organisations' operating expenses — about 40-60%, depending on an organisation's size and complexity. Since the onset of the pandemic, staffing models implemented as short-term solutions leveraged significant use of overtime and temporary staffing, both of which are extremely expensive. Given the fixed-reimbursement payment models that most organisations have with government and private payers, there is limited opportunity for healthcare organisations to recover their increasing labour costs, at least in the short term. Some organisations are monitoring staffing data that could support an add-on to payment rates due to the uncontrollable nature of this cost and the resulting unsustainable operating margins. Consideration should also be given to tracking and analysing any increase, in case of service complexities.

Rising labour costs and relatively inelastic reimbursement continue to create downward pressure on operating margins — and disappointment for many healthcare executives trying to achieve profitability targets. Unlike other industries, which have utilised advances in technology and process optimisation to reduce the cost of labour as a percentage of expense, the provision and delivery of healthcare is still very much a labour-intensive service. The macroeconomic factors driving increases in anticipated labour costs include inflation (see below), shortages of clinical and nonclinical workers, and continued fierce competition for healthcare workers with in-demand skills.

In addition to the economic drivers for wage increases, issues covered above such as burnout, decreased job satisfaction and the ageing of the workforce are also negatively impacting the supply of clinical staff. Given the lead time required for expanding class sizes of nursing programs and the current shortage of nursing instructors, the supply of nurses is unlikely to grow meaningfully in the short term.

Compounding the impact of traditional labour costs (i.e., wages, benefits and payroll tax), many employers in the healthcare industry are now offering expanded benefits, including tuition reimbursement, flexible work options and a variety of caregiver benefits.[17] Many providers also are offering access to mental health services along with modified or new employee assistance programs. Although these are strong tools for recruitment and retention, they all result in increased labour cost.

The pandemic and government policies surrounding public health practices continue to have an impact

According to the WHO, adequately addressing the shrinking labour force will be a significant policy concern for health authorities and governments around the world in the coming years. The most common cause of disruptions to health services in a majority of the WHO member states will be a lack of available health workers.[18]

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[16] *Nurse Staffing Think Tank: Priority Topics and Recommendations*, Partners for Nurse Staffing Think Tank, 2022: www.nursingworld.org/~49940b/globalassets/practiceandpolicy/nurse-staffing/nurse-staffing-think-tank-recommendation.pdf.

[17] "Hospitals are boosting benefits to attract talent, Aon report shows," Emilie Shumway, HR Dive, September 27, 2022: www.hrdive.com/news/hospitals-boosting-benefits/632795/.

[18] Ibid

In the United States, $154 billion of Health and Human Services COVID-19 awards have been issued as of November 2022 associated with the Coronavirus Preparedness and Response Supplemental Appropriations Act of 2020; the Families First Coronavirus Response Act; the Coronavirus Aid, Relief, and Economic Security (CARES) Act; the Paycheck Protection Program and Health Care Enhancement Act (PPPHCEA); the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSSA — Division M, Title III), 2021; and the American Rescue Plan Act of 2021.[19] There are numerous requirements associated with these awards to which recipients, including healthcare organisations, need to be attentive.

While this risk has fallen from the top spot it occupied over the previous two years, the residual effects of the COVID-19 public health emergency continue to pose meaningful challenges for healthcare organisations. On October 13, 2022, Xavier Becerra, U.S. Secretary of Health and Human Services, extended the PHE for an additional 90 days through January 11, 2023.[20] The likelihood of further extensions is unknown.

As a result of the PHE extension, a wide range of regulation relief continues to be in force in the United States, including the waivers enacted under section 1135 of the Social Security Act.[21] These waivers were designed to reduce administrative burdens and better support clinician and patient needs, specifically in the areas of Conditions of Participation (CoP), provider state licensures, the Emergency Medical Treatment and Labour Act (EMTALA), physician referrals, telehealth services and the Health Insurance Portability and Accountability Act (HIPAA), among others.[22]

Additionally, there are other U.S. governmental policies and Centres for Medicare and Medicaid Services (CMS) guidance that are focus areas for regulators and will impact healthcare organisations. These include the No Surprises Act,[23] price transparency,[24] health equity,[25] and the 340B Drug Pricing Program.[26] Additionally, the CMS SAFER Guides require Medicare Promoting Interoperability Program participants to attest to security, safety and interoperability measures.[27] A key challenge for healthcare organisations will be responding to these new policy areas as well as preparing to operate in a post-PHE environment, in which the 1135 waivers will no longer apply.

Economic conditions, including inflationary pressures, raise new questions

Financial performance is a top concern of healthcare leadership, as margins greatly decreased due in large part to the pandemic and public health emergency. Moreover, margins have remained thin due to other drivers, including shifts to value-based reimbursement models, transitioning care to other sites of service, shifts in market share due to acquisitions and consolidation, and the overall growing costs of care delivery and operations due to inflation and labour shortages.

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[19] HHS COVID-19 Funding, HHS TAGGS: https://taggs.hhs.gov/Coronavirus/Providers.

[20] "Renewal of Determination That a Public Health Emergency Exists," U.S. Department of Health & Human Services, Administration for Strategic Preparation & Response: https://aspr.hhs.gov/legal/PHE/Pages/covid19-13Oct2022.aspx.

[21] "Waiver or Modification of Requirements Under Section 1135 of the Social Security Act," U.S. Department of Health & Human Services, Administration for Strategic Preparation & Response: https://aspr.hhs.gov/legal/1135-Waivers/Pages/default.aspx.

[22] "Waiver or Modification of Requirements Under Section 1135 of the Social Security Act," U.S. Department of Health & Human Services, Public Health Emergency, March 13, 2020: www.phe.gov/emergency/news/healthactions/section1135/Pages/covid19-13March20.aspx.

[23] No Surprises Act, Centers for Medicare and Medicaid Services: www.cms.gov/nosurprises.

[24] Hospital Price Transparency, Centers for Medicare and Medicaid Services: www.cms.gov/hospital-price-transparency.

[25] Health equity, Centers for Medicare and Medicaid Services: www.cms.gov/pillar/health-equity.

[26] 340B Drug Pricing Program, Health Resources & Services Administration: www.hrsa.gov/opa.

[27] 2022 Medicare Promoting Interoperability Program Requirements, Centers for Medicare and Medicaid Services: www.cms.gov/regulations-guidance/promoting-interoperability/2022-medicare-promoting-interoperability-program-requirements.

For provider organisations, funding that was provided to maintain operations has run short, ending in 2022, and the financial burden of delivering care into 2023 will further hinder their financial success.

In most countries around the world, there is no additional government support in sight. Thus, healthcare organisations are seeking solutions to decrease operational costs and improve revenues, as their pre-pandemic strategies may no longer be sufficient. Lower operating margins hinder the ability of leadership to further invest in their strategy for growth, implement process efficiencies through the use of technology, and align their organisation toward value-based care reimbursement models and population health management. Additionally, as noted earlier, healthcare organisations are struggling to obtain the talent needed to support improvement efforts.

With healthcare organisations being prime targets for cyber attacks, data privacy, security and identity protection are key priorities

Cyber events are key disrupters across healthcare organisations of all sizes, and the number of threats and associated attack techniques continues to expand. Healthcare organisations are often targeted by attackers, as they know the environments are overly complex, the amount of sensitive (and thus valuable) data is vast, and the overall maturity of security controls and programs tends to be lower compared to other industries. This makes healthcare organisations ripe for attacks and extortion. Combine these cyber threats with a continuing expansion of the amount of data being collected from patients and members, and the industry has a risk area that many healthcare organisations know will continue to require ongoing investment, improvement and monitoring.

As the industry emerges from the pandemic, healthcare continues to operate in a tumultuous environment. Mergers and acquisitions are rampant, with many organisations combining both provider and payer functions under one corporation in the hope of expanding their patient and customer delivery footprint. This creates an extremely complex regulatory compliance environment, as data that is collected is used for different purposes across organisational business lines and units. These newly created, complex organisations share network connections, forming a much different risk profile and larger footprint for attack. Varying levels of controls and maturity across the breadth of the organisational landscape, including numerous vendors and third parties that provide services and their own connections, can allow attackers to target and infiltrate trusted environments, further elevating the risk of impermissible uses and disclosures of sensitive information.

FIGURE 26A

Energy and Utilities — 2023

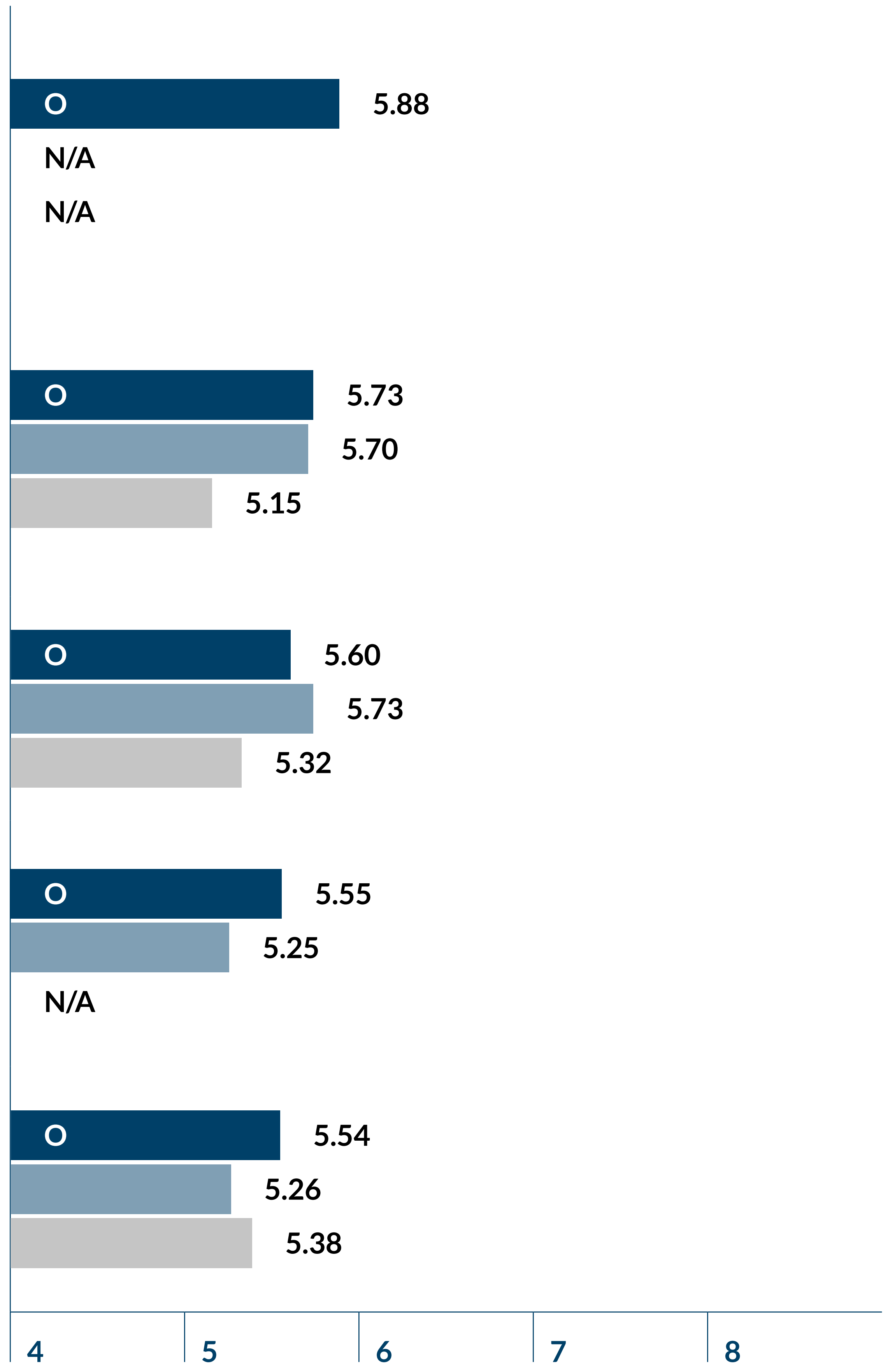
The rising threat associated with catastrophic natural disasters and weather phenomena (e.g., wildfires, floods, extreme heat/cold, cyclones/hurricanes/typhoons) may create significant operational challenges that threaten our assets, employees, and our ability to deliver products and services to our customers

Uncertainty surrounding our organisation’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

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

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

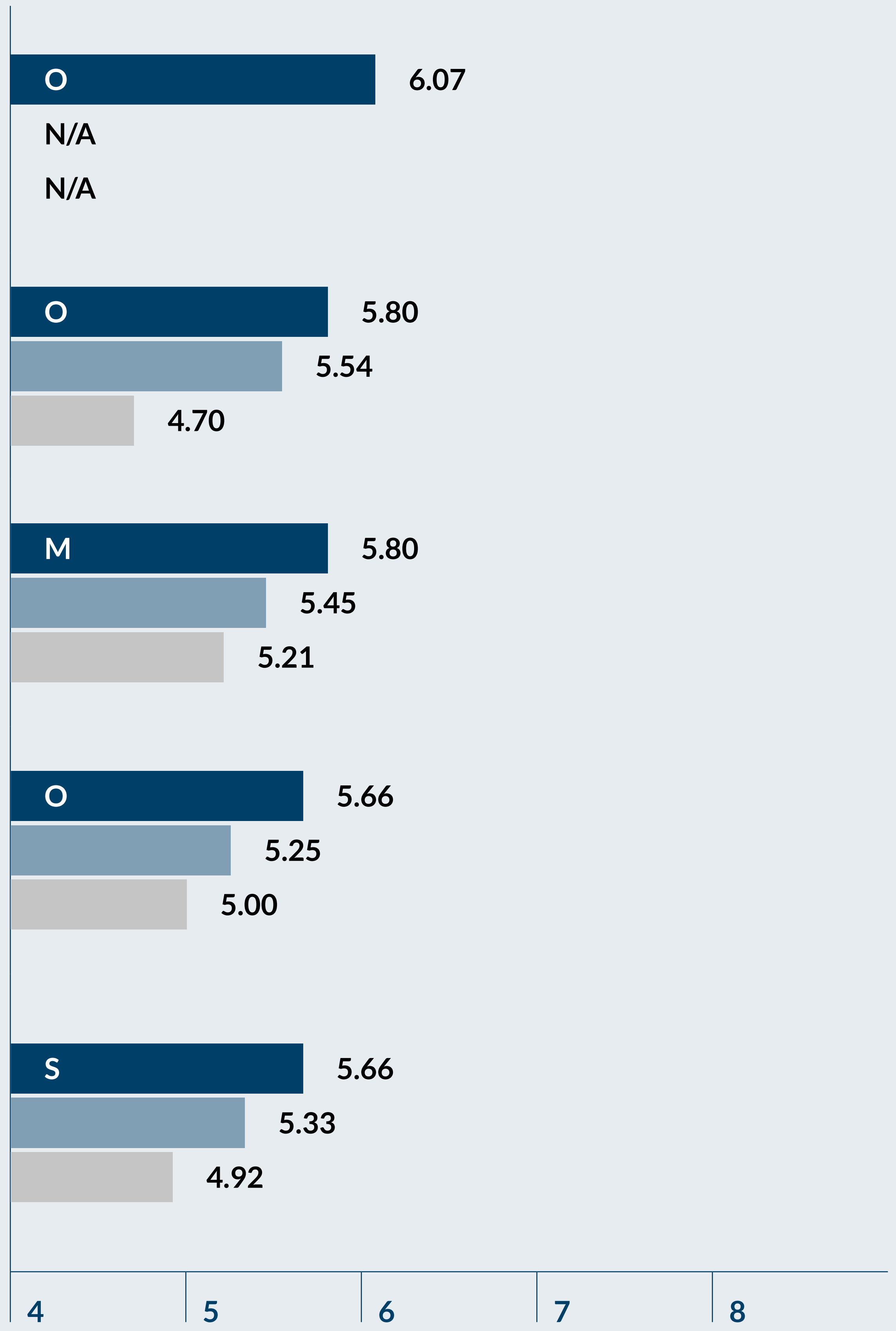
Our approach to managing ongoing demands on or expectations of a significant portion of our workforce to “work remotely” or increased expectations for a transformed, collaborative hybrid work environment may negatively impact our ability to retain talent as well as the effectiveness and efficiency of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



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

FIGURE 26B

Energy and Utilities — 2032



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

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

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 organisation 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

Inability to utilise 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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

Commentary — Energy and Utilities Industry Group

BY TYLER CHASE
GLOBAL LEADER, ENERGY AND UTILITIES INDUSTRY PRACTICE, PROTIVITI

Operational issues are the priority focus for energy and utilities executives in 2023 as they seek to guide their organisations through a time of significant transition and growth for the industry. Many of these companies are under intense pressure to modernise their operations, amplify innovation and adopt new business models to meet the rapidly rising demand for energy services (including renewable energy solutions) driven by population growth, electrification and other trends.

Increased confidence about meeting regulatory challenges

In our 2022 survey, the top five risks for the energy and utilities industry were also operational. But the 2023 list is markedly different from the 2022 list with regard to regulatory risks. The 2023 results did not include risks related to governance and sustainability issues, which were among the top five in 2022. In fact, they don't even rank among the top 10. This shift is likely due to industry leaders feeling more confident that their companies can respond promptly and effectively to intensifying and evolving regulatory demands — at least in the near term. ("Regulatory changes and scrutiny" ranks seventh among the industry's top risks for 2032.)

Many energy and utilities companies have spent the past year, or even longer in some cases, looking inward to determine how they can be more resilient and agile overall. Improving management of regulatory risks has been part of that effort. We've also seen leading companies ramping up their monitoring and compliance efforts to meet increasing environmental, social and governance (ESG) demands. Those efforts have improved their ability to respond to future regulatory changes, including climate-related disclosures, and their executive leadership no doubt recognises that.

Eyes on the sky: worries about extreme weather threats

Energy and utilities executives may be worrying less about climate change policies, regulations and expanding disclosure requirements, but they are very concerned about their companies facing operational challenges due to extreme weather threats. Ranking first on the list of top risks for the industry in 2023 and 2032 is a new addition to our survey: "The rising threat associated with catastrophic natural disasters and weather phenomena may create significant operational challenges that threaten our assets, employees, and our ability to deliver products and services to our customers."

While this risk isn't in the top 10 list for the overall survey results for either 2023 or 2032, it's understandable why it ranks as the number one concern for energy and utilities firms for the year ahead — and for the next decade. Extreme weather events around the globe are taxing, disrupting and, in many cases, outright destroying critical energy infrastructure, including renewable energy infrastructure. These events can impact energy companies' operations in other ways, as well, from preventing essential staff from reaching critical worksites to sidelining company communications.

Research shows that 83% of major power outages between 2000 and 2021 were attributed to extreme weather.[28] And 2022 delivered plenty of extreme weather events that disrupted the delivery of energy services to millions of people or otherwise strained energy supplies, including Hurricane Ian and its 15-foot storm surge in Florida, a powerful derecho that impacted nearly half of Canada's

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[28] www.wuft.org/news/2022/09/15/weather-events-caused-most-major-power-outages-in-the-past-two-decades/.

population, and a summer drought and series of heat waves in Europe.

A complex and persistent issue: supply chain fragility

Supply chain risk emerged as a top five concern for energy and utilities executives in our 2022 survey, and it remains firmly in the second spot on the 2023 list. As we noted in our previous survey report, the energy industry is especially vulnerable to supply chain risk given that its value chain is highly service-, feedstock-, parts- and equipment-oriented. Many organisations run lean inventories as a strategy to balance out operational costs. Increased globalisation and reliance on third parties are also contributing factors to supply chain fragility for energy companies.

Additionally, there are lingering issues from the pandemic that hinder supply chain operations for energy and utilities businesses, including longer delivery times and constrained supplier capacity due to pent-up demand. Supply chains are also on the front lines when it comes to battling inflationary pressures.

However, we have observed many energy and utilities businesses focusing on improving their supply chain resilience over the past year as part of their overall efforts to strengthen their operations. We see leading companies building formal supply chain capabilities, which is helping them to improve all aspects of their supply chain processes. Strategies include regionalising and investing in cloud technology to enhance supply chain visibility.

The current emphasis on improvement and innovation to reduce supply chain risk exposure could explain why “uncertainty surrounding the organisation’s core supply chain” does not appear in the list of top five concerns for this industry for 2032.

The need to adapt to the future of work

“Succession challenges and ability to attract and retain top talent” is the third-ranked risk for energy and utilities companies in 2023, moving down from the top spot in our 2022 survey and dropping slightly in score. That change is likely due to executives’ concerns about extreme weather threats and supply chain issues intensifying due to recent events, more than companies seeing any significant improvement over the past year in their ability to recruit and hold on to in-demand talent in a labour market that remains tight.

Energy and utilities businesses are still struggling to hire and train enough skilled talent to replace experienced personnel retiring from the workforce in growing numbers — and often earlier than expected. Many companies face an uphill climb in convincing younger workers that they can offer a rewarding career path. The need to secure highly specialised technical skills for jobs in areas such as renewables is another obstacle to energy companies overcoming critical staffing challenges.

Other trends are poised to exacerbate the energy and utilities industry’s “people problem” — as evidenced by the fourth and fifth risks for 2023. “Changes in the overall work environment,” which ranks fourth, includes shifts to hybrid work environments, the expansion of digital labour, and changes in the nature of work and who does that work. Ranking fifth is the concern that the organisation’s “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” could undermine the company’s ability to retain valued talent.

These risks are intertwined — and energy companies are certainly not unique in trying to decide how and if they can accommodate remote or hybrid work arrangements for employees for the long term. Also, like many businesses, they are finding out the hard way that taking an inflexible stance toward working remotely can worsen recruiting and retention issues. Realistically, many jobs in the energy and utilities industry can’t be performed from a home office. However, that doesn’t mean employers in the space can’t work with employees in these roles to create more flexible schedules or compensate them with other benefits such as more paid time off.

Looking more closely at the fourth-ranked risk on the 2023 list for this industry, another potential driver is around merger and acquisition (M&A) activities making it more difficult for energy companies to sustain their organisational culture and business model. M&A activity is rising as energy firms look to grow their business and/or jump-start or expand their interests in renewable energy. To prevent the loss of critical human capital due to post-merger "culture shock," traditional energy companies aiming to acquire renewable energy startups will want to handle the integration process with great care, prioritising communication and employee engagement from the outset.

Overview of top risk issues for 2032

As noted earlier, energy and utilities executives anticipate that "the rising threat associated with catastrophic natural disasters and weather phenomena" — from wildfires to floods to hurricanes — will be the top risk for their firms through the next decade.

Another operational risk, "resistance to change," holds second place on the top five list for 2032. That isn't surprising, given that this risk is typically in our top five and holds the sixth spot for 2023. A macroeconomic risk — "the adoption of digital technologies" — which also ranks second on the 2032 list of top risks for this industry, provides insight as to why leaders of energy and utilities firms are concerned that resistance to organisational change may restrict their company's ability to make timely and necessary adjustments to its core operations and business model.

Energy companies are under pressure to transform their operations and take advantage of technologies like artificial intelligence and natural language processing to increase efficiency and decision-making. Given that workers with these skills are in short supply in the labour market, energy businesses will need to upskill and reskill existing employees to work with these new tools to fully realise their value proposition — and not all staff will welcome that change or be able to adapt to it. Also, as organisations automate more processes, some jobs will become obsolete or change dramatically. All of these dynamics, if not handled well, can impact organisational culture negatively and hinder companies' efforts to transform.

Two risks that share fourth place on the 2032 list are closely tied to "the adoption of digital technologies" risk. One is operational in nature — "the inability to utilise data analytics and 'big data' to achieve market intelligence, gain insights on the customer experience, and increase productivity and efficiency." The other is strategic: "Rapid speed of disruptive innovations enabled by advanced technologies and/or other market forces may outpace our organisation's ability to compete."

Clearly, energy and utilities executives are worried that their businesses — and their workers — will be unable or *unwilling* to keep pace with technological change in the coming decade. That, in turn, can prevent these companies from deploying advanced technologies effectively to create sustainable competitive advantage, and to help drive transformation in the energy industry as a whole.

However, these leaders can take some comfort in knowing that executives in other industries foresee similar challenges for the future, as four of the top five risks for energy and utilities companies in 2032 appear on the top 10 list of risks in our global survey.

It's an exciting but daunting time of transformation, transition and growth for the energy and utilities industry. The risk environment is high, but there is also tremendous opportunity for forward-thinking leaders to evolve their operations so they can create a future-forward workforce, increase operational output and deliver new energy solutions.

Analysis across geographic regions

As in prior years, we obtained responses from enough organisations across the globe to split the sample into eight distinct regions. We analyse responses across these eight regions to determine whether respondents across different geographic locations rank-order risks differently. Similar to our analysis summarised earlier in this report, we analyse responses about overall impressions of the magnitude and severity of risks across the three categories. Again, the scores in Figure 27 reflect responses to the question about the overall impression of the magnitude and severity of risks using a 10-point scale where 1 = "Extremely Low" and 10 = "Extremely High."

Geographic region	Number of respondents
North America	617
Asia	148
Australia/New Zealand	109
India	75
Europe	165
Latin America	114
Middle East	61
Africa	15
Total number of respondents	**1,304**

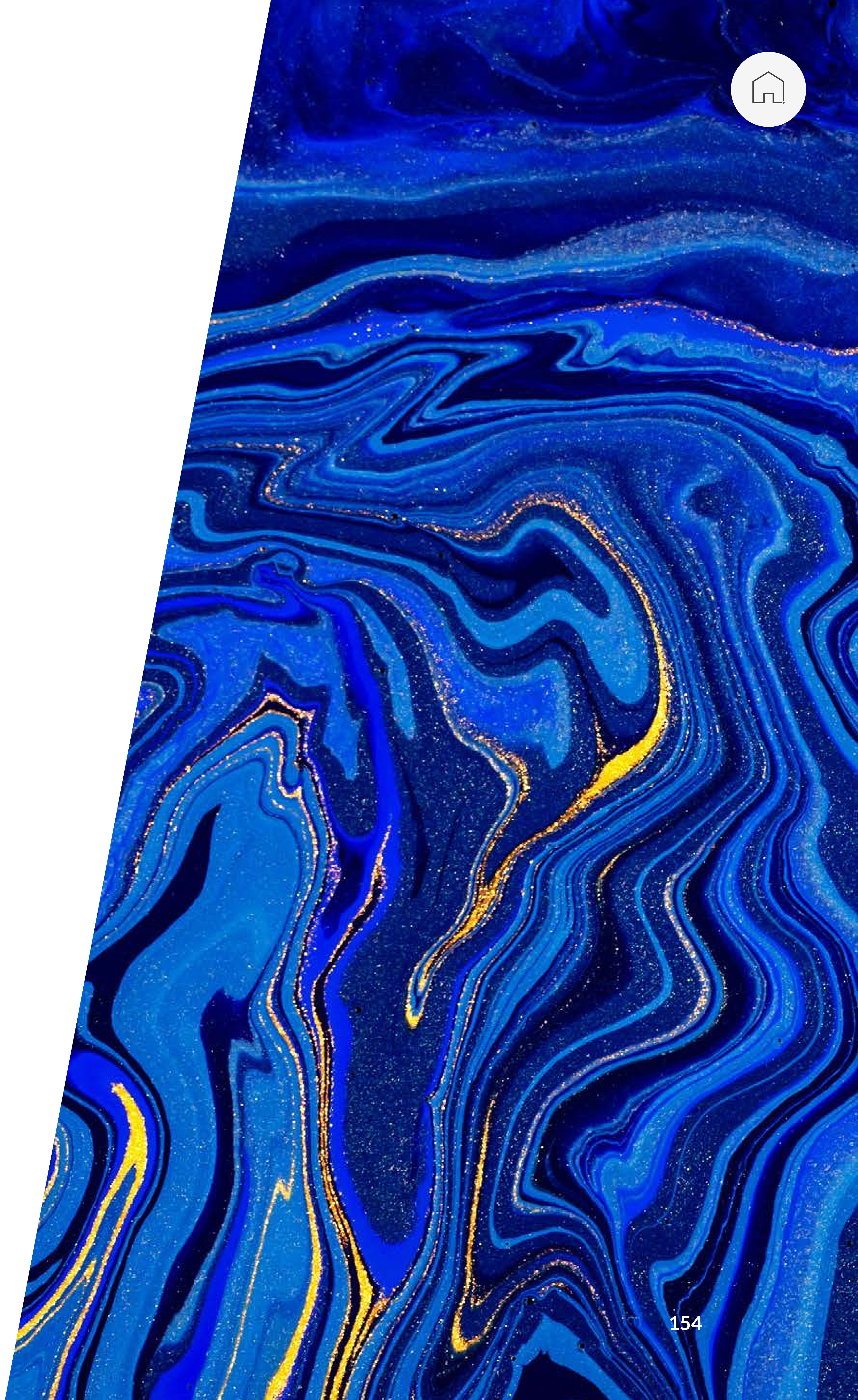
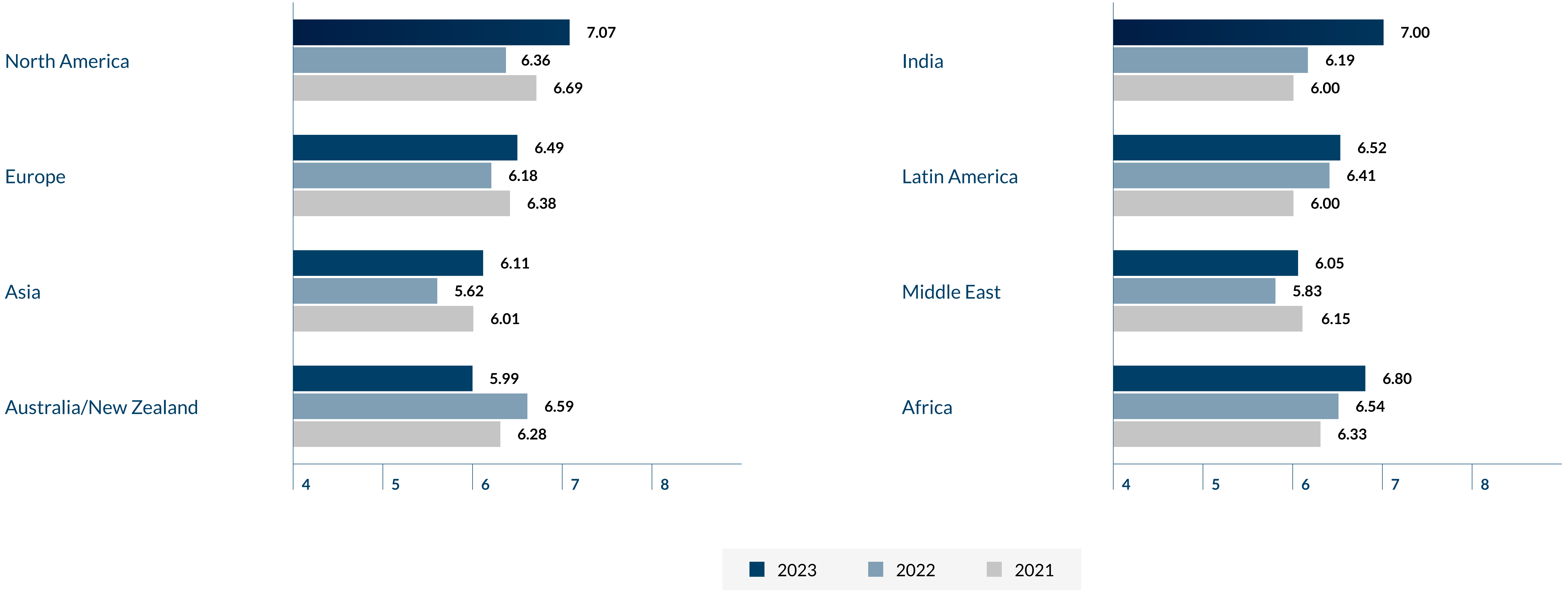


FIGURE 27

Overall, what is your impression of the magnitude and severity of risks your organisation will be facing with respect to achieving its objectives and reaching or exceeding profitability (or funding) targets over the next 12 months?



	2023	2022	2021
North America	7.07	6.36	6.69
Europe	6.49	6.18	6.38
Asia	6.11	5.62	6.01
Australia/New Zealand	5.99	6.59	6.28
India	7.00	6.19	6.00
Latin America	6.52	6.41	6.00
Middle East	6.05	5.83	6.15
Africa	6.80	6.54	6.33

Globally, organisations from all eight geographic regions agree that the overall magnitude and severity of risks are of a "Significant Impact" level in 2023. Only organisations in Australia/New Zealand rate the severity and magnitude of 2023 risks as less severe than 2022 (and this region rated severity and magnitude the highest among the eight regions last year). North American organisations as well as those from India exhibit the largest increase from 2022 to 2023 and are the only organisations that rate the magnitude and severity of risks at 7.0 or higher when looking to 2023.

2023 risk concerns

Respondents in North America indicate the highest level of overall risk concerns for 2023 and, along with respondents from India, the highest increase in perceptions of risk from 2022 to 2023. Surprisingly, in comparison to the overall rating, North American respondents rate only two of the 38 specific risks at the "Significant Impact" level. Four of the regions — Australia/New Zealand, India, the Middle East and Africa — rate all five of their top five risks as "Significant Impact" while Europe and Asia rate three risks at this level. Respondents from Latin America, despite having the fourth highest overall risk concern (of the eight regions), rate only one risk as "Significant Impact" for 2023.

Figures 28-35 highlight the top five risks from each of the eight geographic regions we examine and include the risk scores for 2023 and, separately, for 2032, as well as, where available, scores for those risks reported in our 2022 and 2021 reports. There are noticeable differences in views about risks around the globe, which is especially important for multinational organisations to consider. Seventeen of the 38 risks appear among the eight geographic regions as top five risks and nine of the 12 macroeconomic risks are recognised in the top five risks when looking across the different geographies, with Latin America reporting all five of their top risk concerns as macroeconomic in nature. As noted above, respondents from Australia/New Zealand, India, the Middle East and Africa rate all five of their top five risks at the "Significant Impact" level. Organisations in the Australia/New Zealand region rate three of their top five risks higher than 6.5 and respondents from Africa identify four risks at the 6.5 level or higher, indicating elevated levels of concern relative to other regions. Respondents from North America, Latin America, Europe and Asia report zero risks at this level.

Respondents in North America indicate the highest level of overall risk concerns for 2023 and, along with respondents from India, the highest increase in perceptions of risk from 2022 to 2023.

Consistent with our full sample results, the risk associated with succession and talent acquisition and retention is top of mind for many regions. Six of the eight included this risk in their top five. Across the eight regions, the variation in top five results is striking. Only four risks are common to at least four of the eight regions. The macroeconomic risk related to economic conditions and two additional operational risks are ranked in the top five by at least four of the eight regions. These two risks relate to (1) supply chain challenges, and (2) organisational culture making it difficult to escalate risk concerns. Only one strategic risk is included among the top five for any of the regions in 2023: organisational resilience and/or agility.

2032 risk issues

Looking further out into 2032, strategic risks become more heightened for all regions. Twenty different risks appear in the top five across the eight regions, with eight of these being strategic risks, seven operational risks and five macroeconomic risks. The two most commonly cited top five risks, each appearing in five of the eight regions, are (1) the adoption of digital technologies, with its implications to reskilling and upskilling existing employees; and (2) organisational culture being resistant to change. Two additional risks appear on four of the eight regions' top five: (1) succession challenges and talent acquisition and retention, and (2) the rapid speed of disruptive innovation.

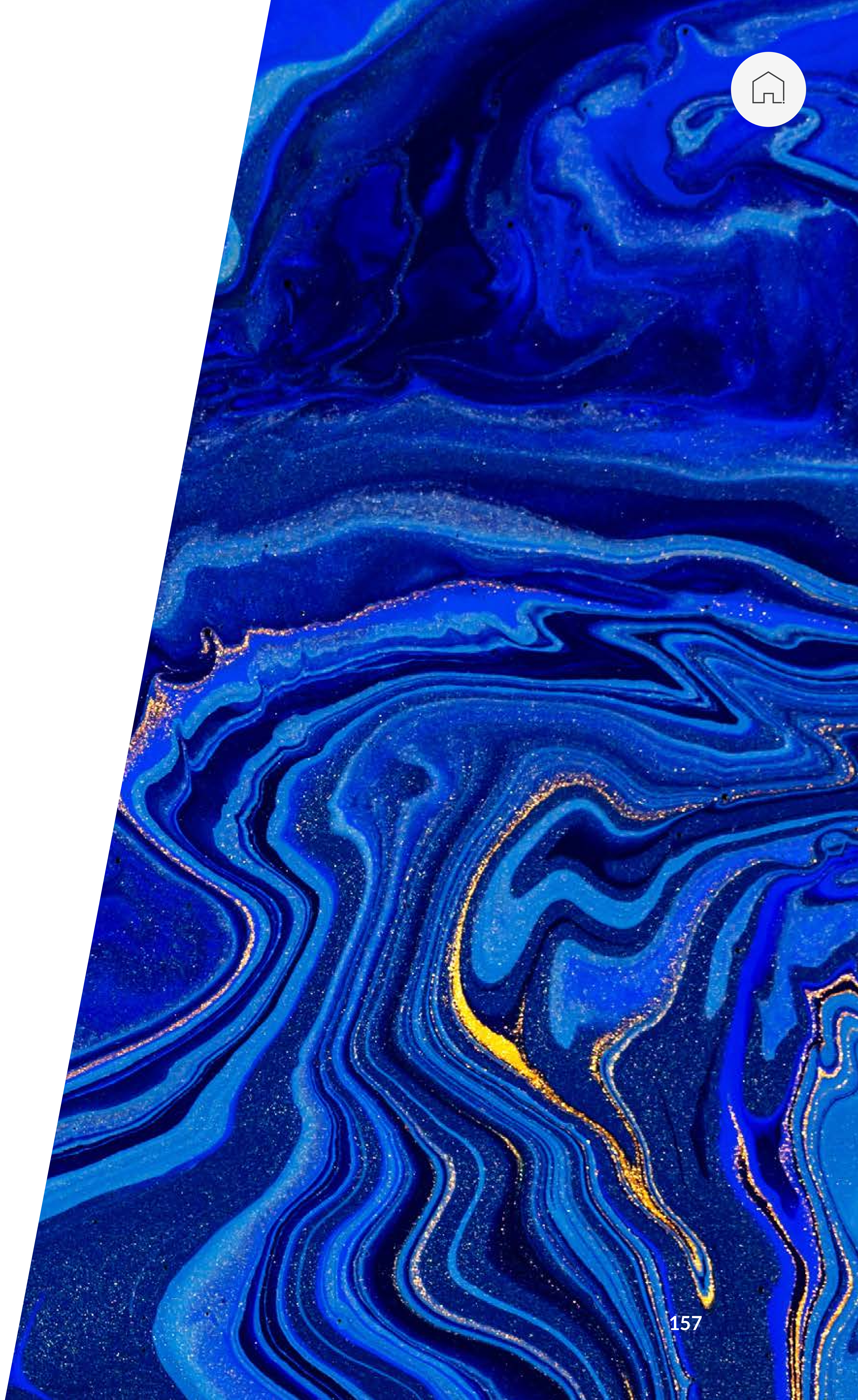


FIGURE 28A

North America HQ Organisations — 2023

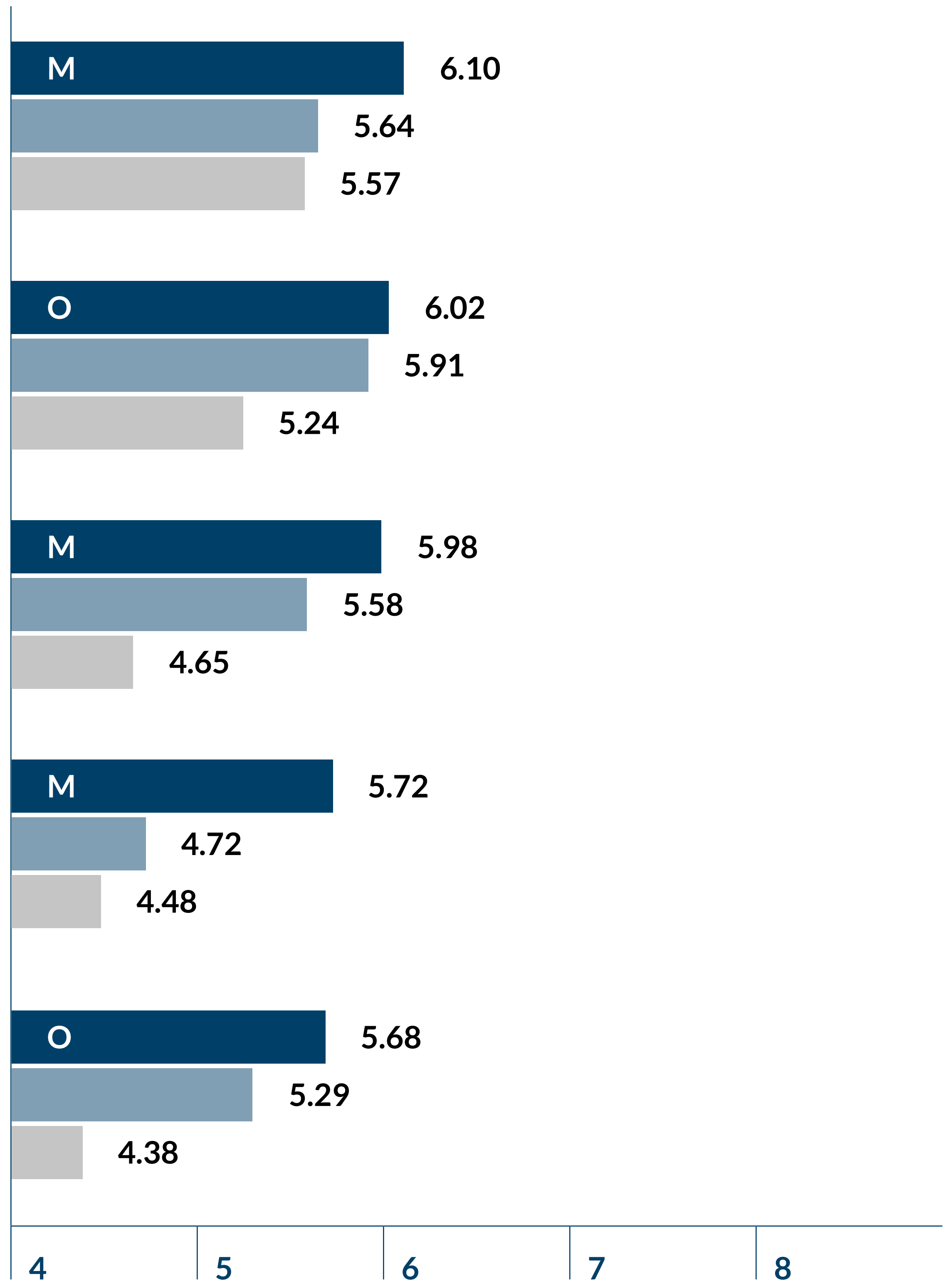
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation

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

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

The current interest rate environment may have a significant effect on the organisation’s capital costs and operations

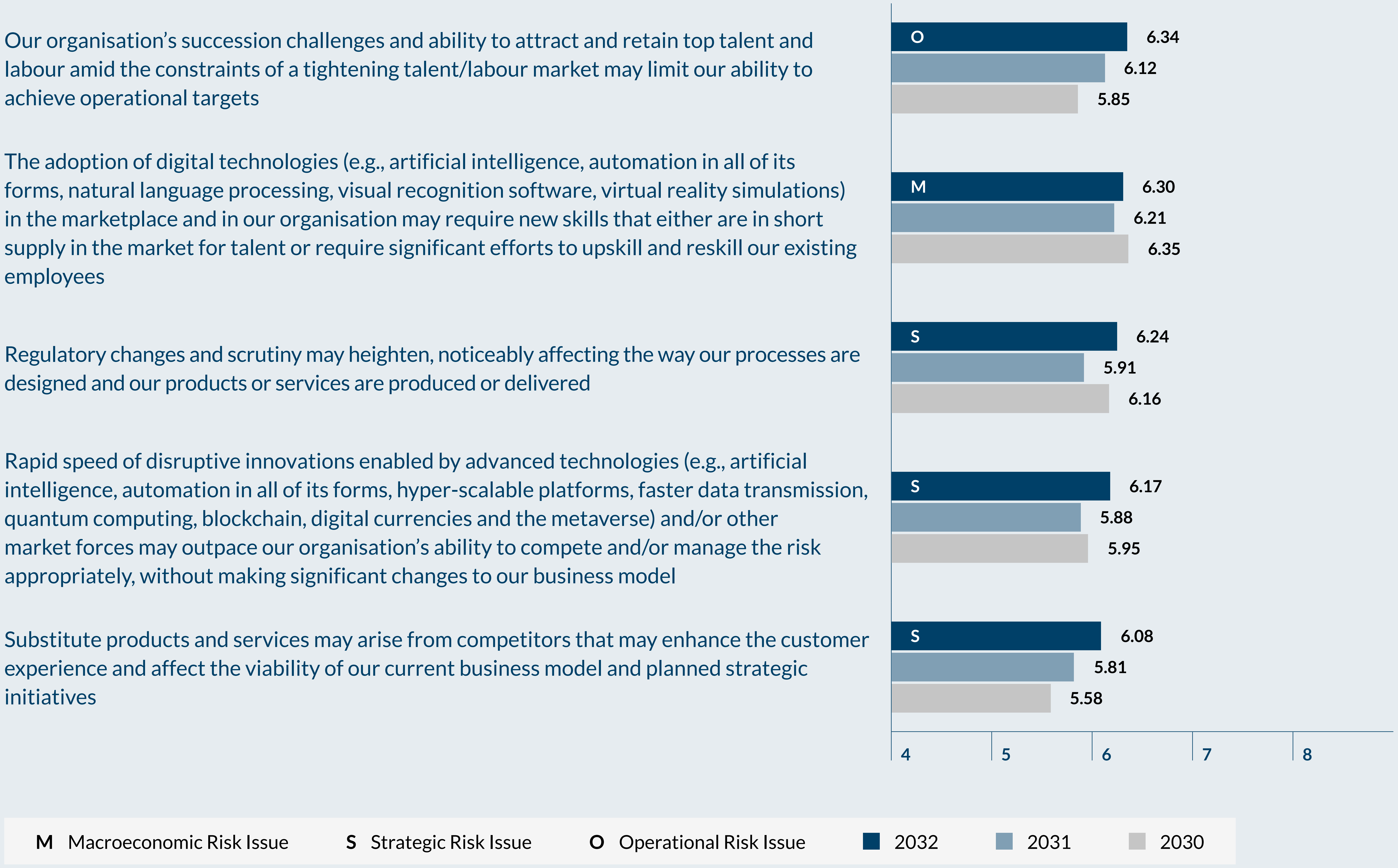
Uncertainty surrounding our organisation’s core supply chain including the viability of key suppliers, scarcity of supplies, energy sources, unpredictable shipping and distribution logistical issues, or lack of price stability in the supply chain ecosystem may make it difficult to deliver our products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



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

FIGURE 28B

North America HQ Organisations — 2032



Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour 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 organisation 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

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

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 organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

FIGURE 29A

Europe HQ Organisations — 2023

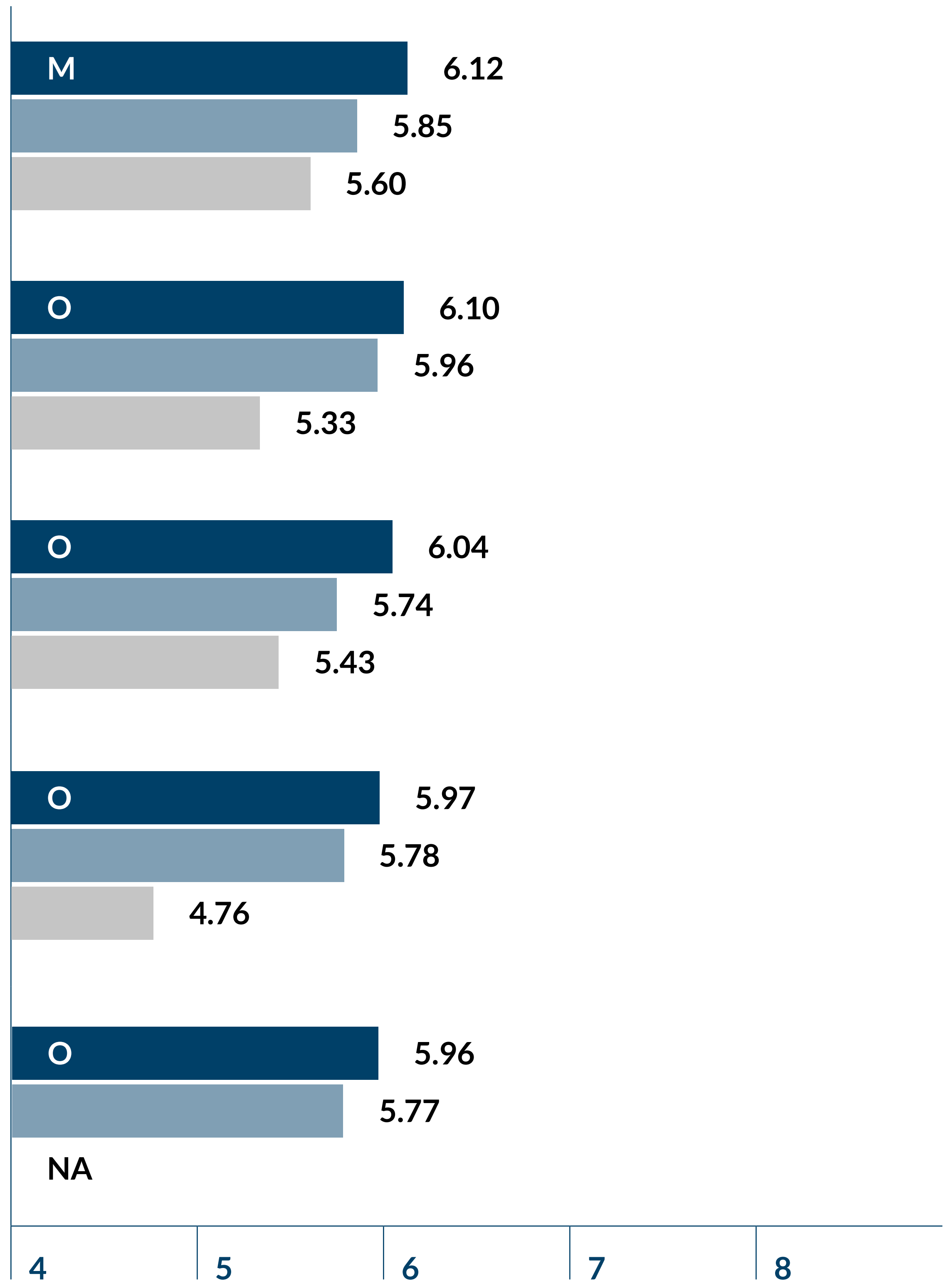
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation

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

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

Uncertainty surrounding our organisation’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

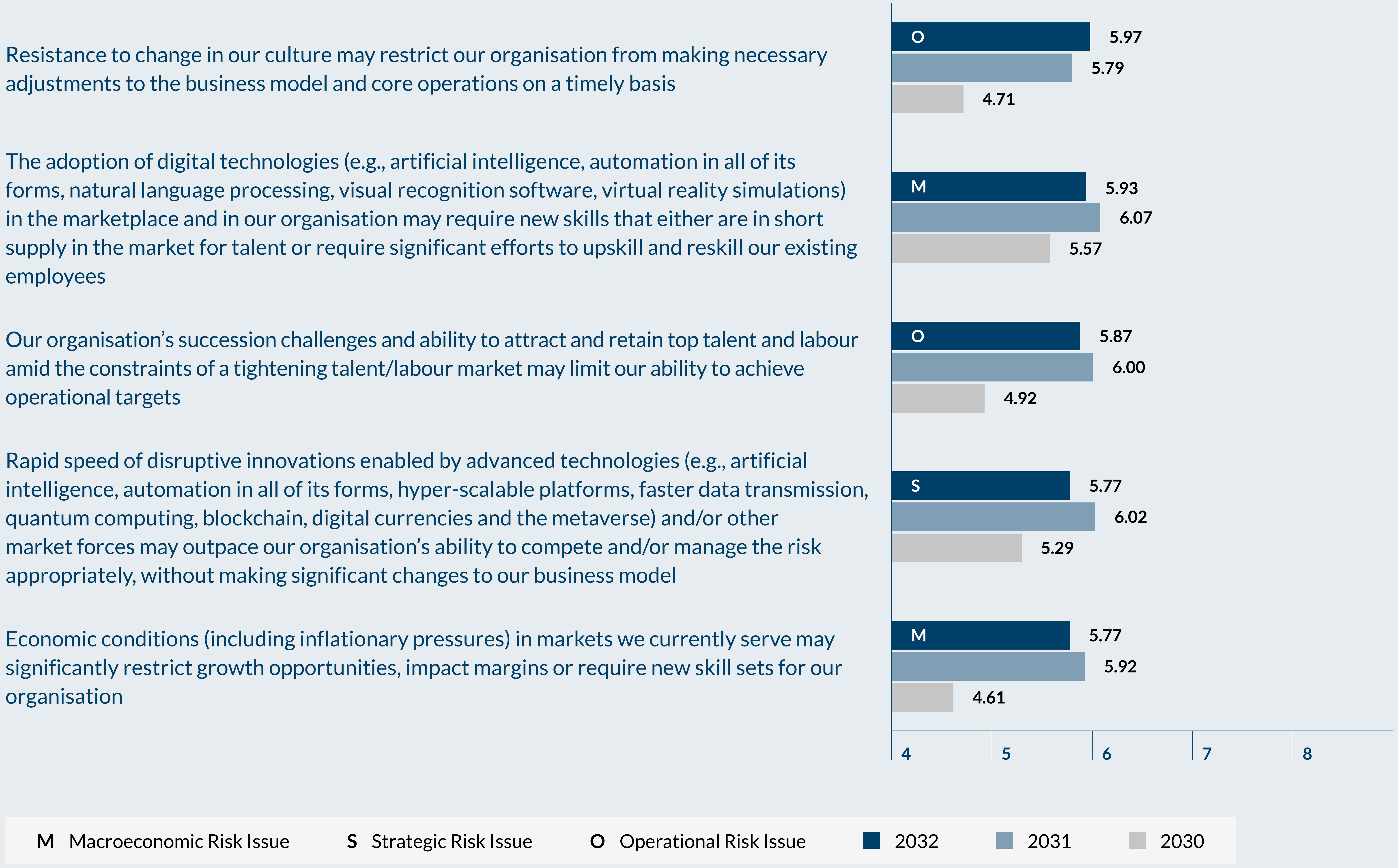
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation’s culture and business model



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

FIGURE 29B

Europe HQ Organisations — 2032



Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	5.97	5.79	4.71
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 organisation 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	M	5.93	6.07	5.57
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	5.87	6.00	4.92
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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model	S	5.77	6.02	5.29
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	M	5.77	5.92	4.61

FIGURE 30A

Australia/New Zealand HQ Organisations — 2023

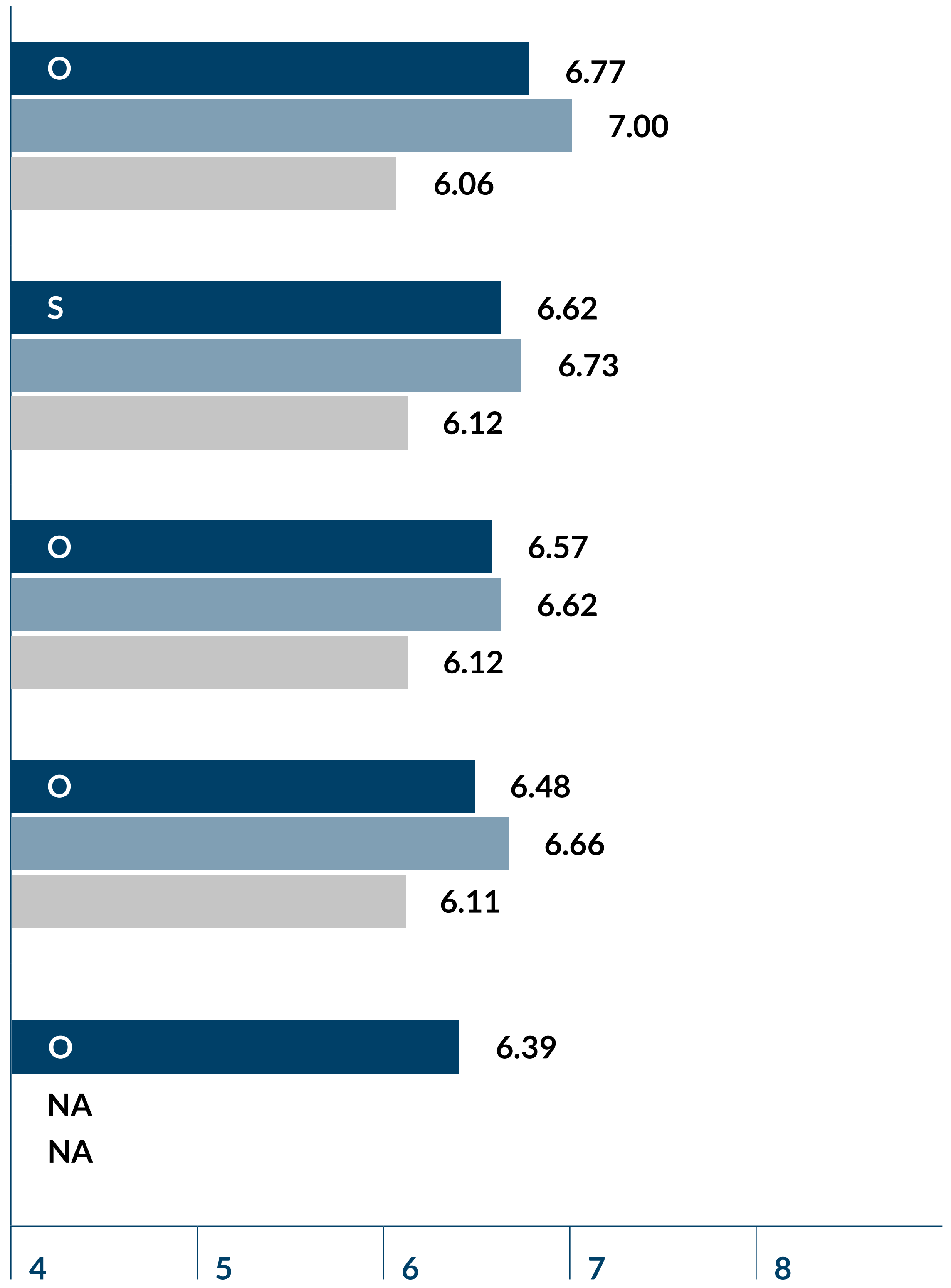
Our organisation's culture may not sufficiently encourage the timely identification and escalation of risk issues and market opportunities that have the potential to significantly affect our core operations and achievement of strategic objectives

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

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

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

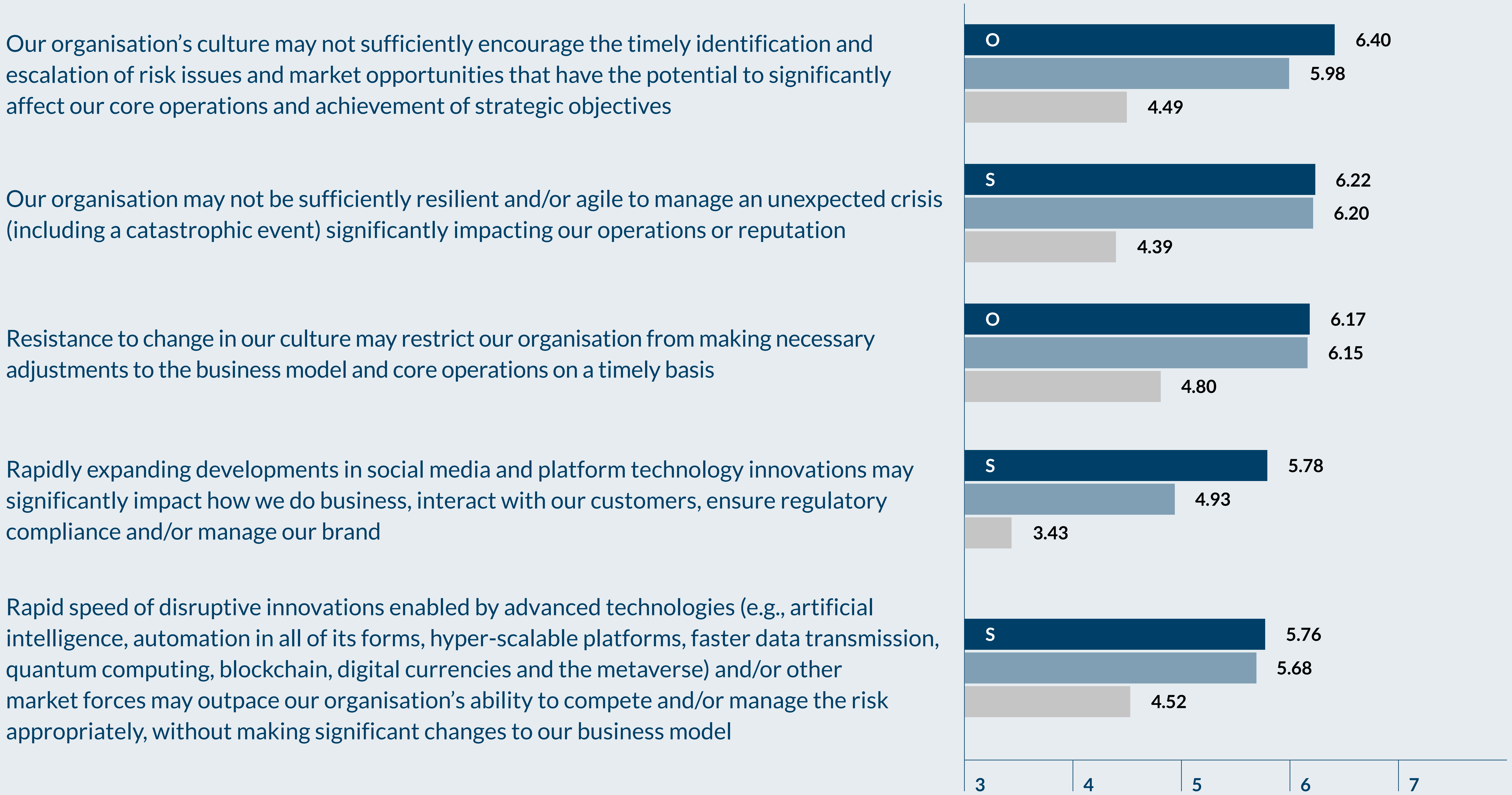
The rising threat associated with catastrophic natural disasters and weather phenomena (e.g., wildfires, floods, extreme heat/cold, cyclones/hurricanes/typhoons) may create significant operational challenges that threaten our assets, employees, and our ability to deliver products and services to our customers



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

FIGURE 30B

Australia/New Zealand HQ Organisations — 2032



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

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

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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model

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

FIGURE 31A

Asia HQ Organisations — 2023

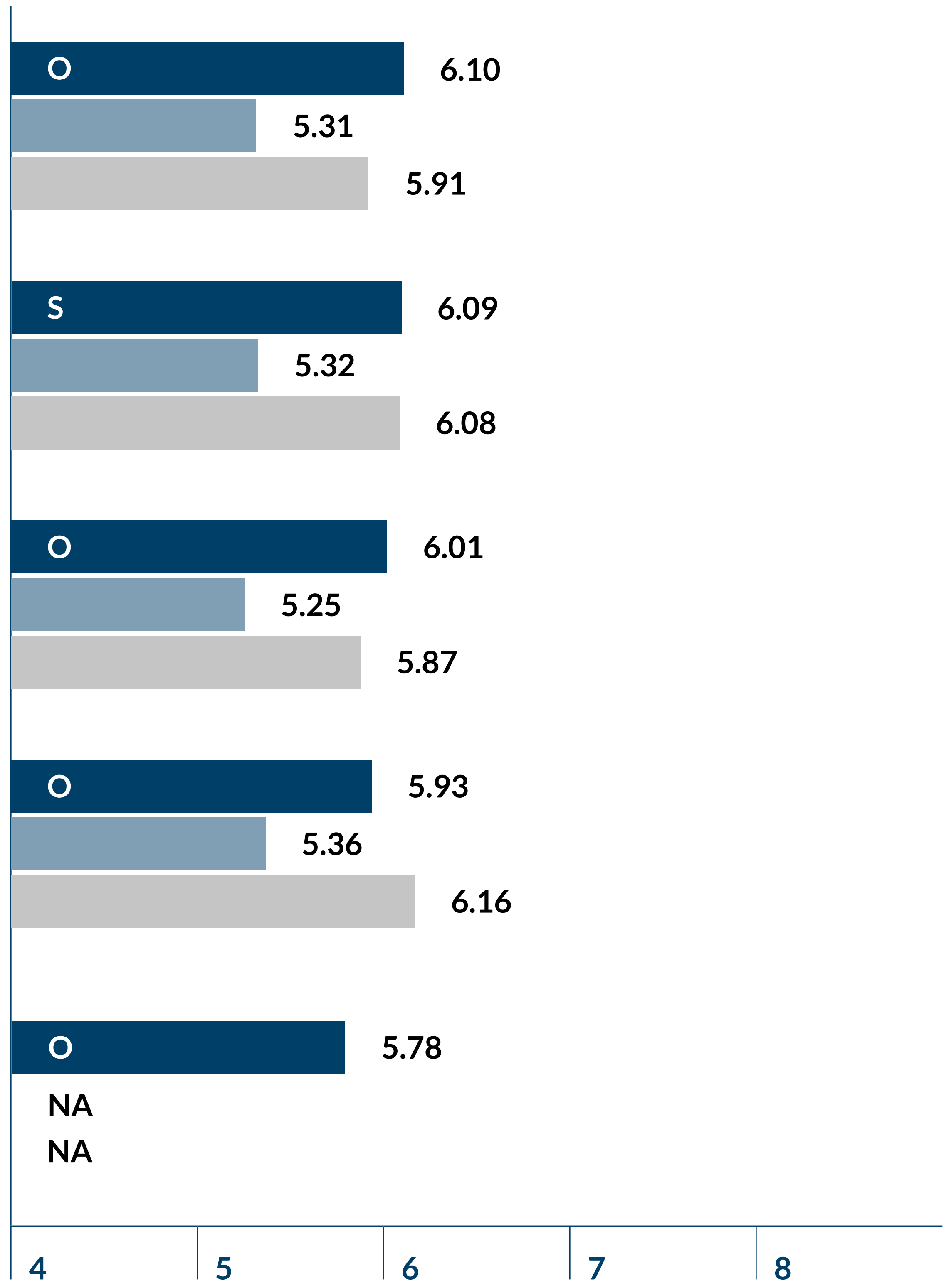
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

Our organisation’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

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

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



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

FIGURE 31B

Asia HQ Organisations — 2032

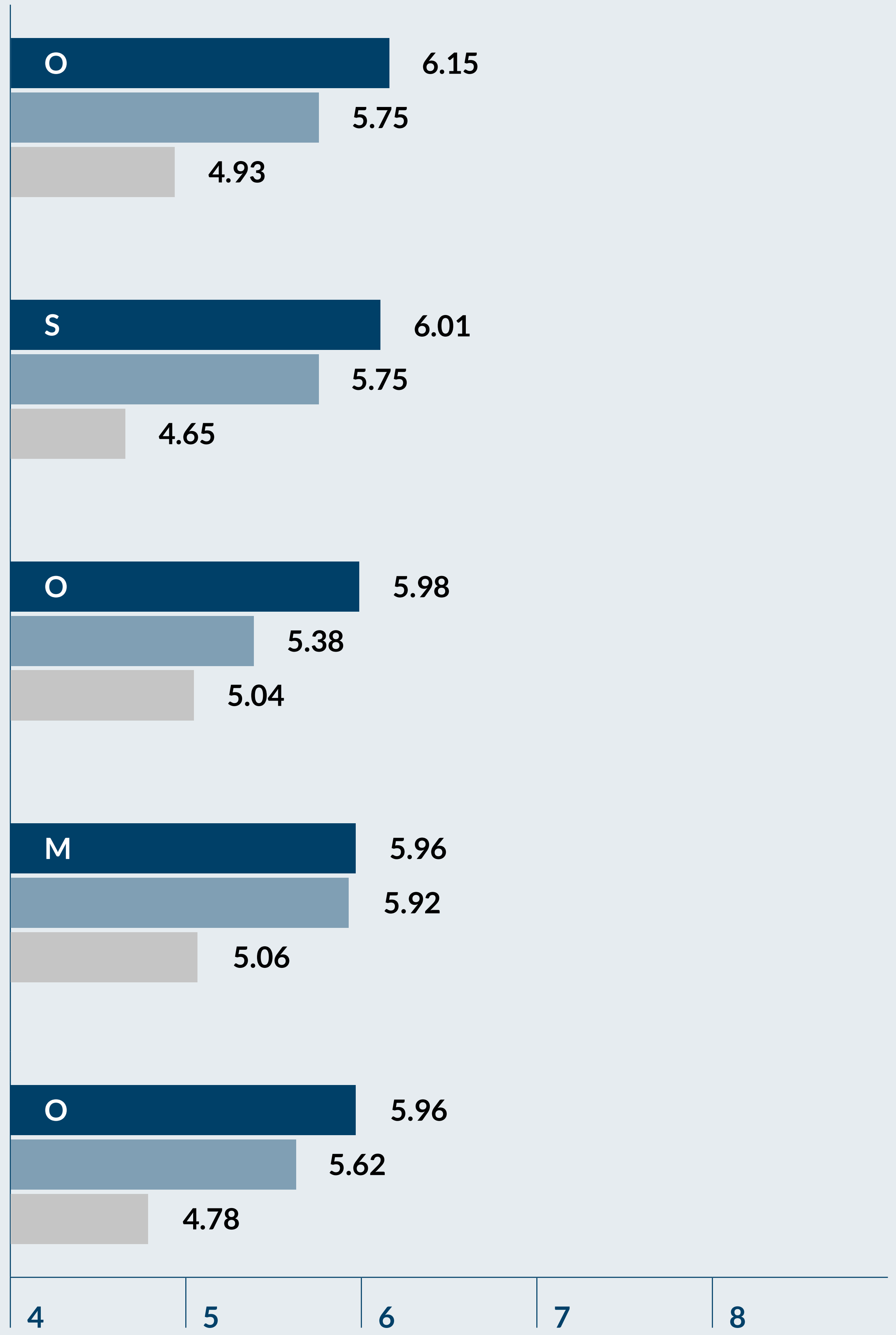
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation'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 organisation from making necessary adjustments to the business model and core operations on a timely basis

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 organisation 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

Inability to utilise 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



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

FIGURE 32A

Latin America HQ Organisations — 2023

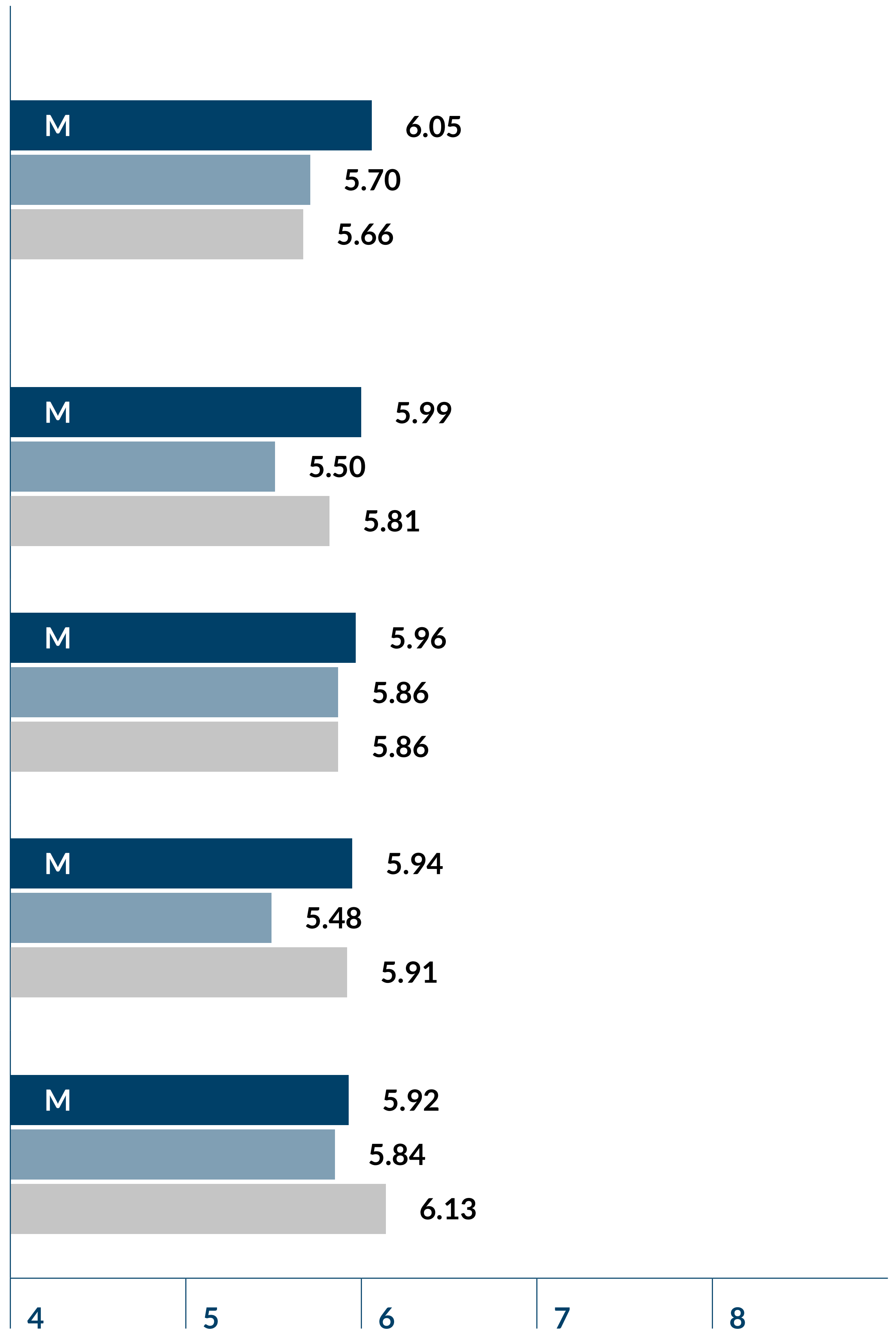
Shifts in perspectives and expectations about social issues and priorities surrounding diversity, equity and inclusion (e.g., board composition, representation in the C-suite and leadership ranks, and onboarding policies) are occurring faster than the pace at which our organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace

Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation

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

The current interest rate environment may have a significant effect on the organisation's capital costs and operations

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 organisation 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



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

FIGURE 32B

Latin America HQ Organisations — 2032

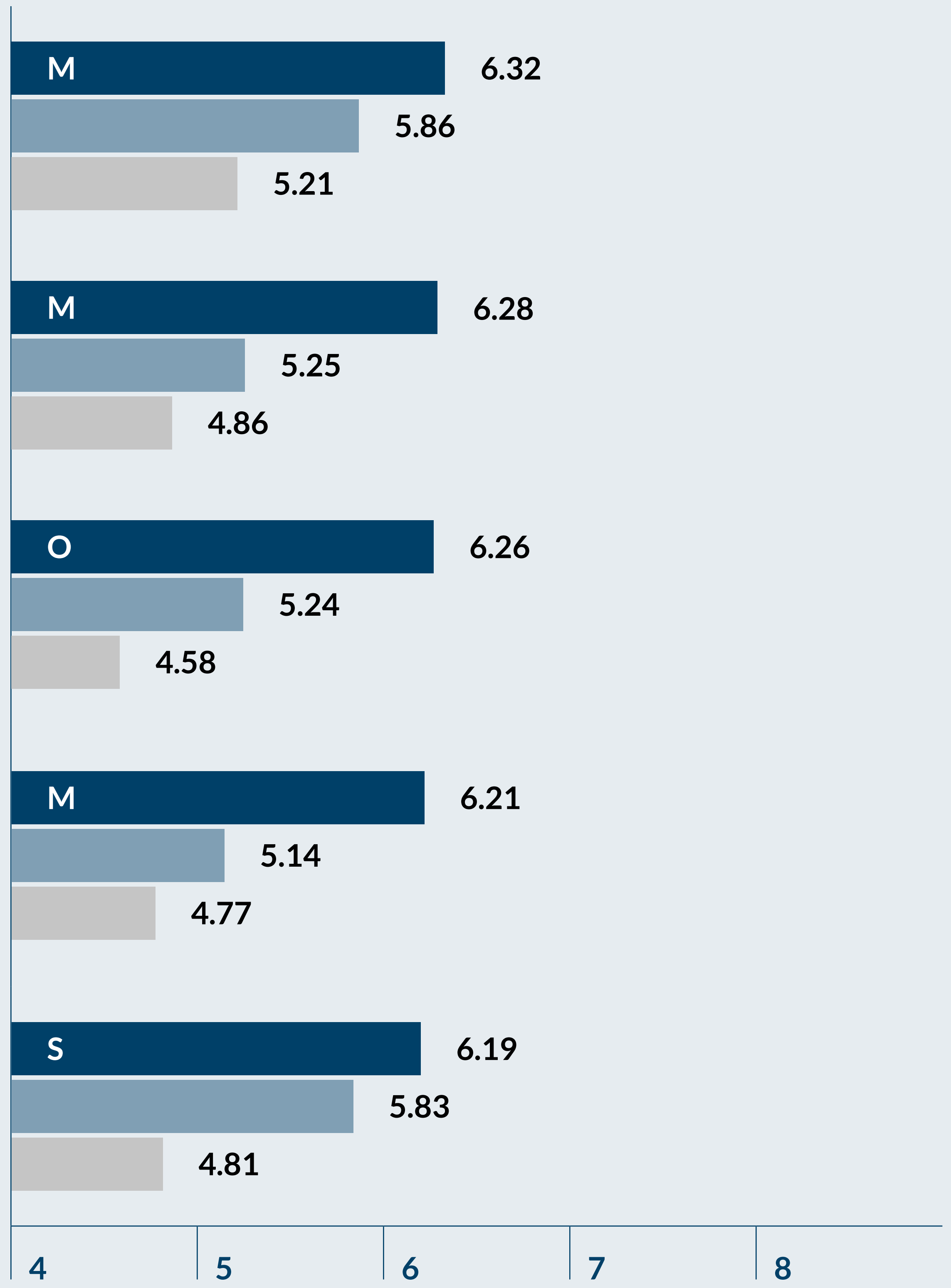
Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation

Our ability to access sufficient capital/liquidity may restrict growth opportunities for our organisation

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

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

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



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

FIGURE 33A

Middle East HQ Organisations — 2023

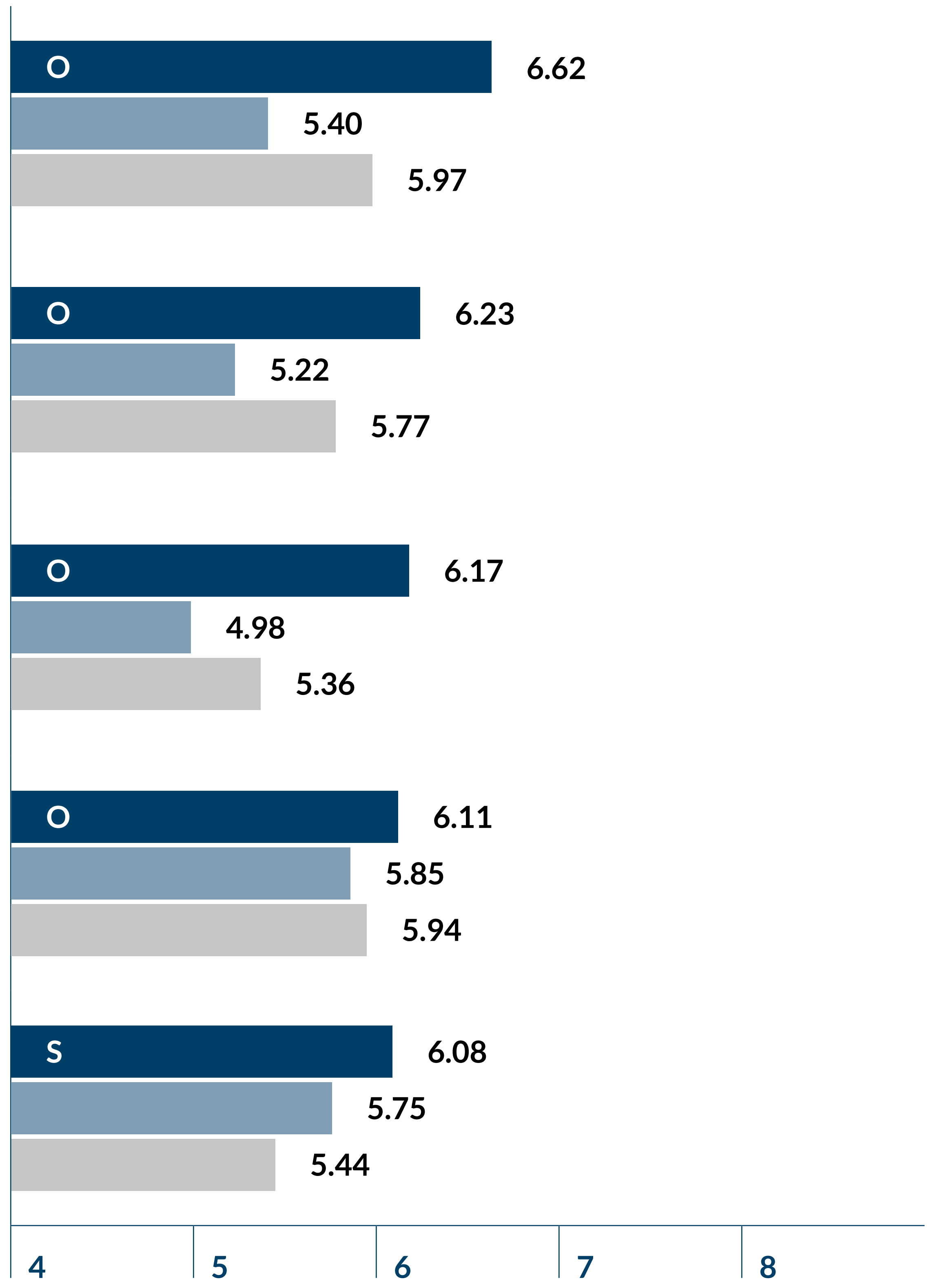
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

Uncertainty surrounding our organisation’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

Our organisation’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 organisation 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

FIGURE 33B

Middle East HQ Organisations — 2032

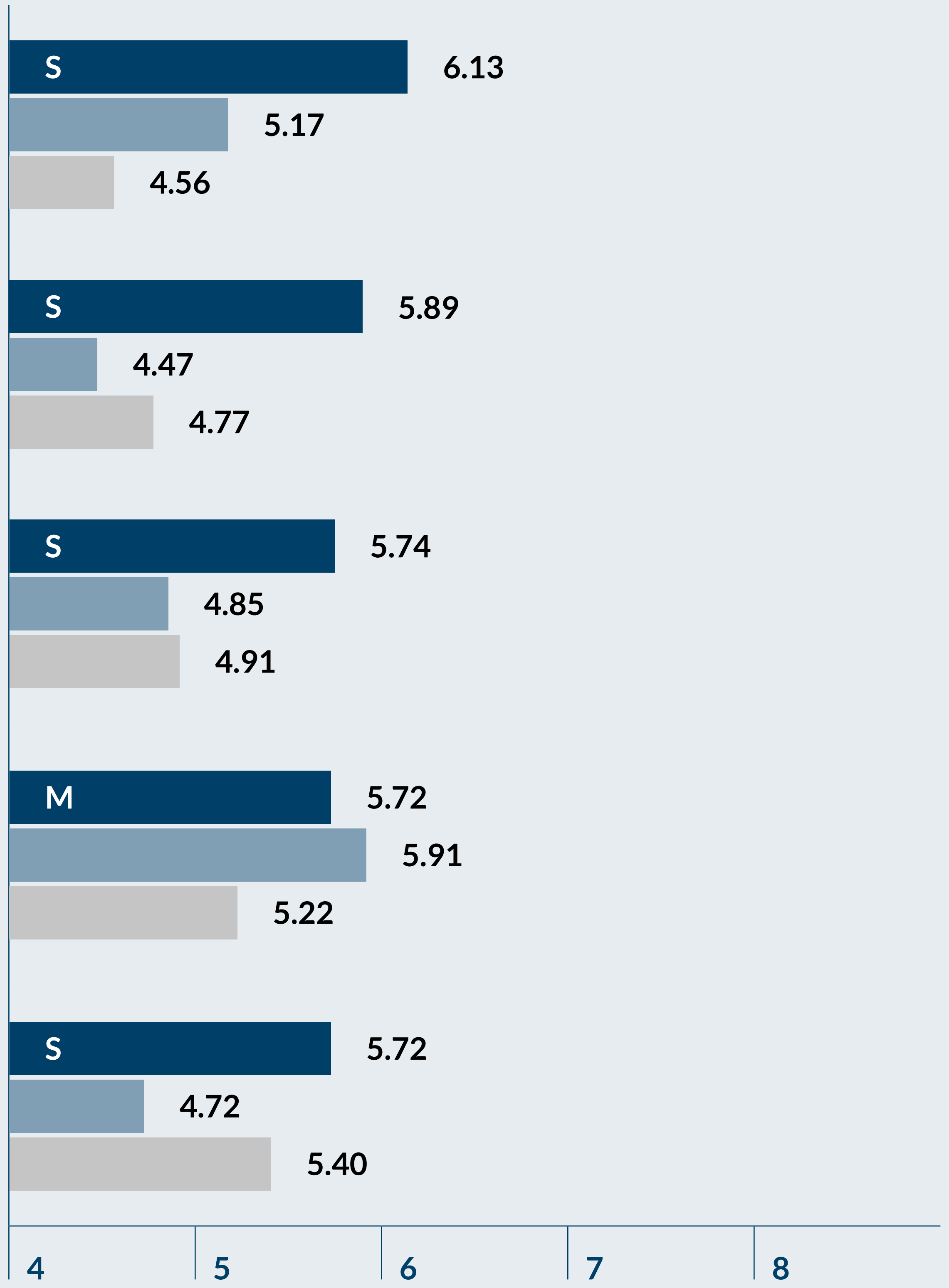
Our organisation may not be sufficiently resilient and/or agile to manage an unexpected crisis (including a catastrophic event) significantly impacting our operations or reputation

Performance shortfalls (including lack of progress on ESG goals/expectations) may trigger activist shareholders who seek significant changes to our organisation’s strategic plan and vision

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

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 organisation 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

Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base



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

FIGURE 34A

India HQ Organisations — 2023

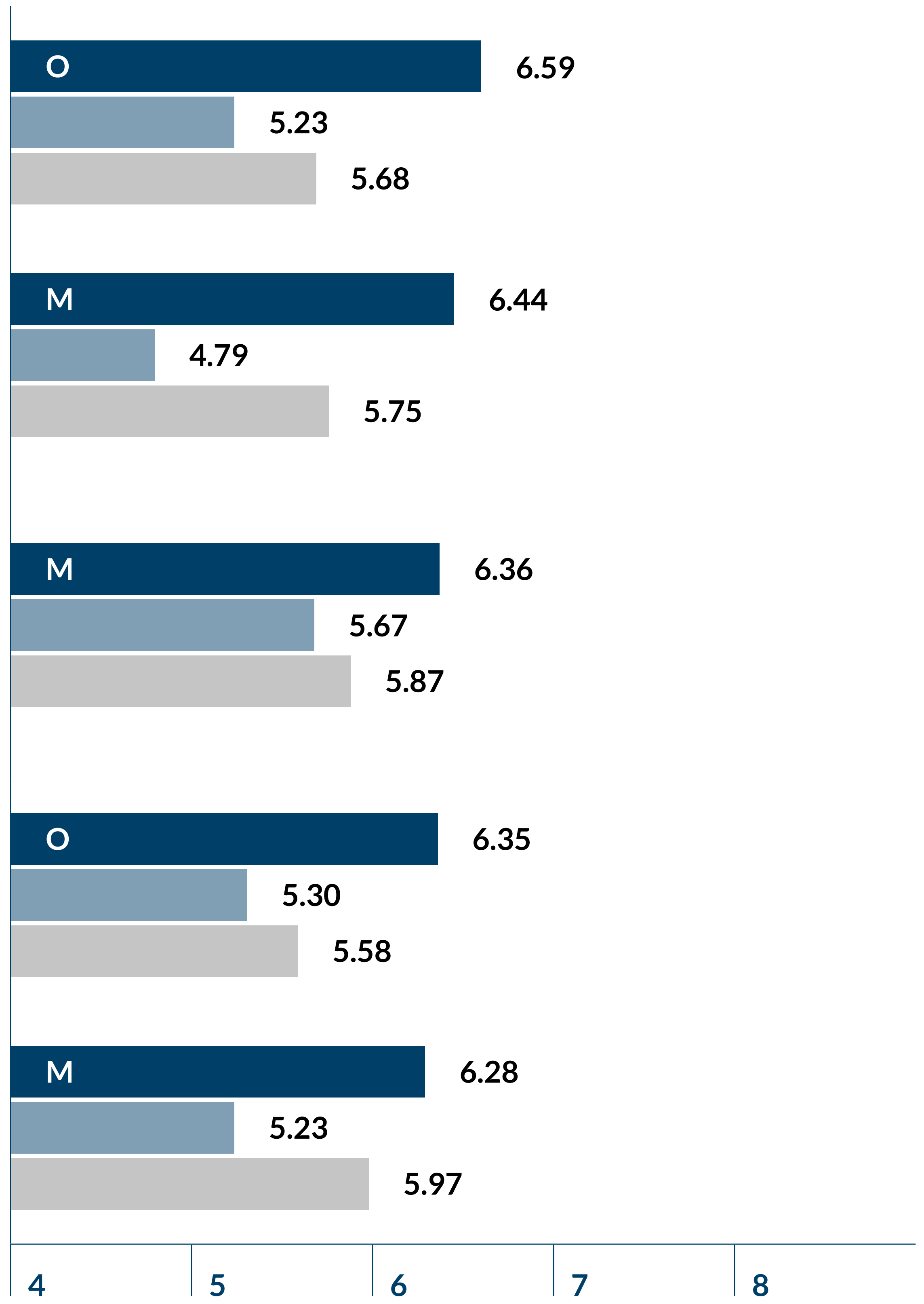
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

Anticipated volatility in global financial markets and currency exchange rates may create significantly challenging issues for our organisation to address

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 organisation is motivated and able to manage effectively, which may significantly impact our ability to attract/retain talent and compete in the marketplace

Our organisation’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

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



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

FIGURE 34B

India HQ Organisations — 2032

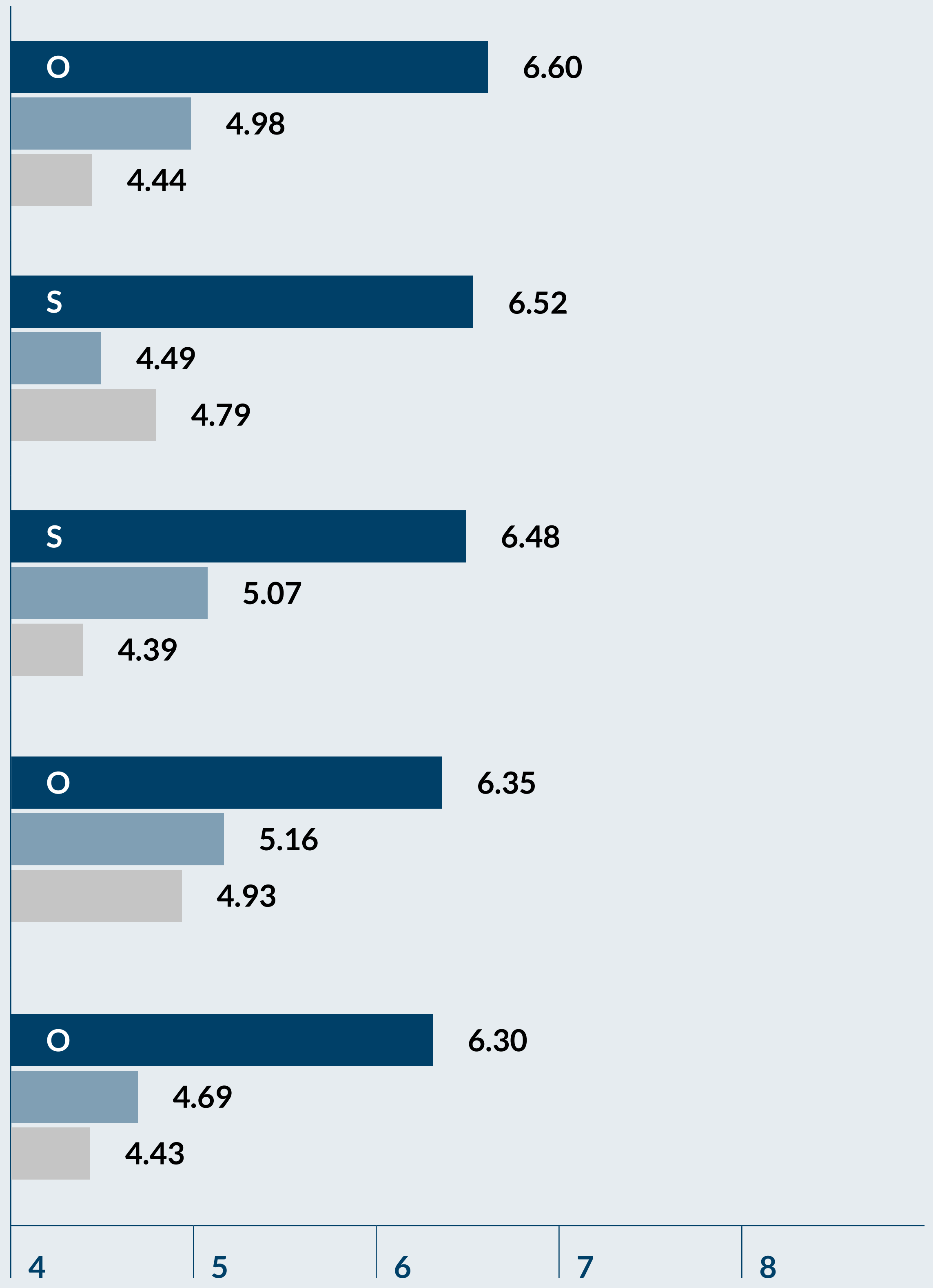
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base

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

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

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



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

FIGURE 35A

Africa HQ Organisations — 2023

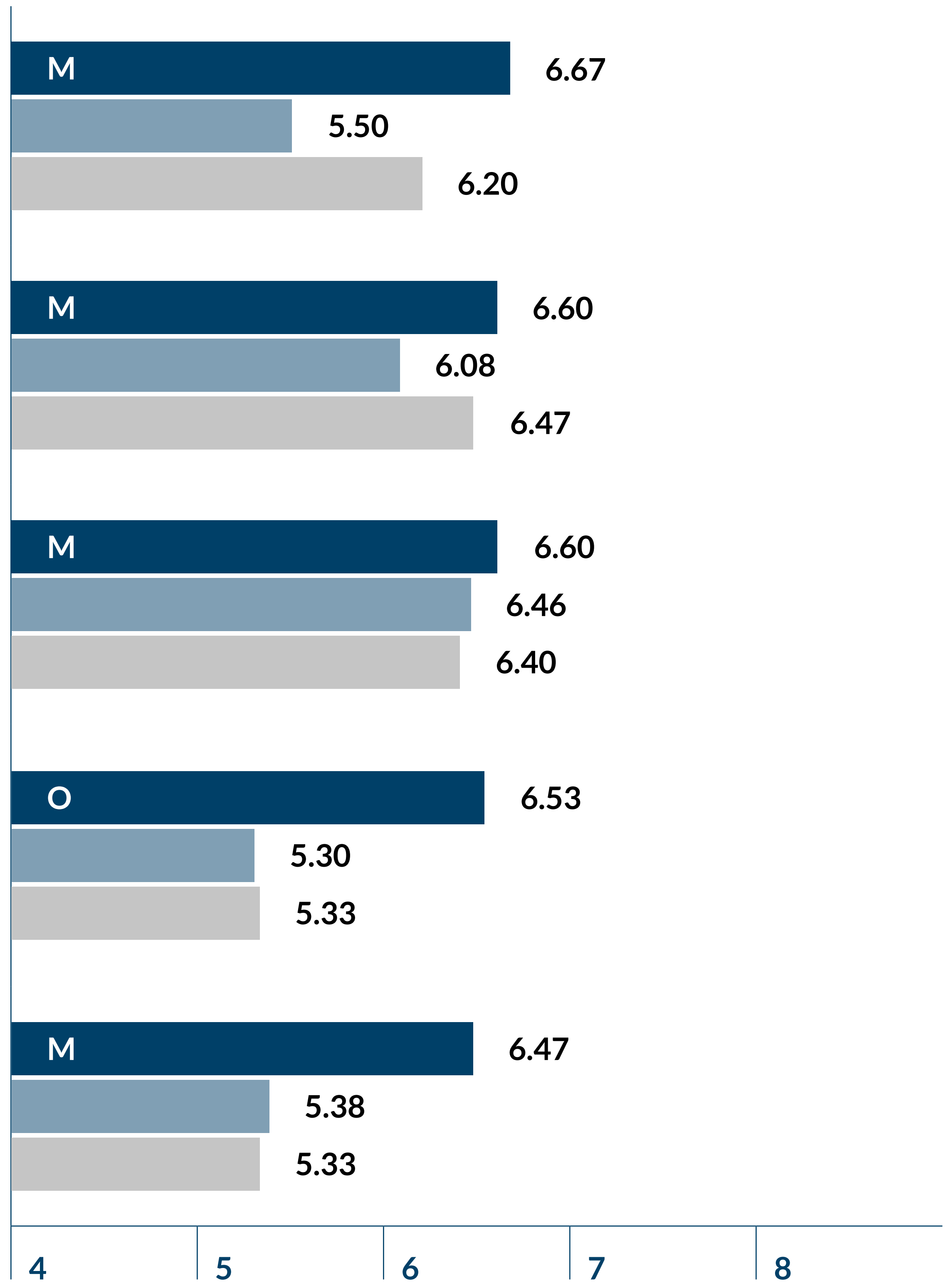
The current interest rate environment may have a significant effect on the organisation’s capital costs and operations

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

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

Uncertainty surrounding our organisation’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

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



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

FIGURE 35B

Africa HQ Organisations — 2032

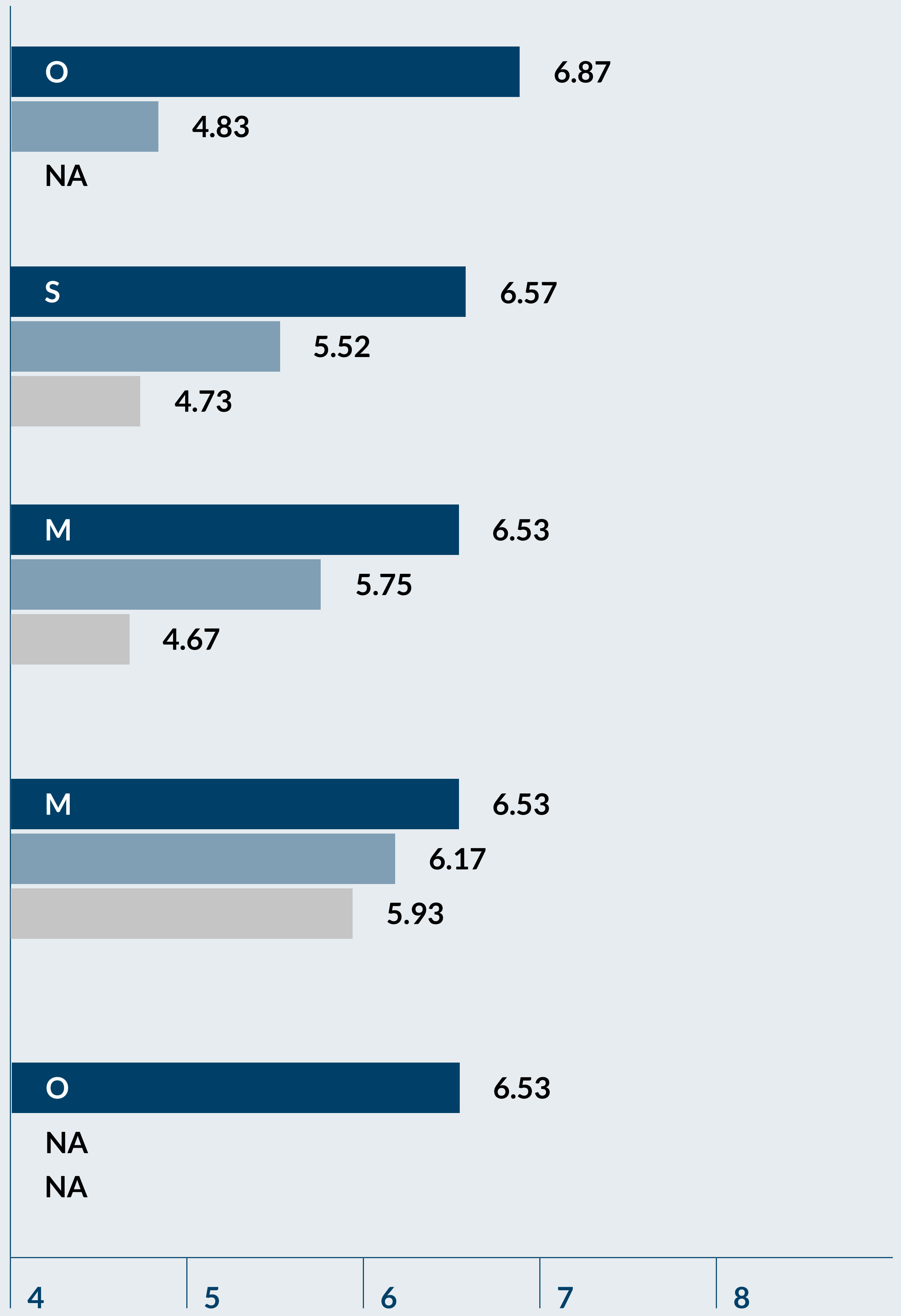
Changes in the overall work environment including shifts to hybrid work environments, expansion of digital labour, changes in the nature of work and who does that work, and M&A activities may lead to challenges to sustaining our organisation's culture and business model

Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base

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

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 organisation 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

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



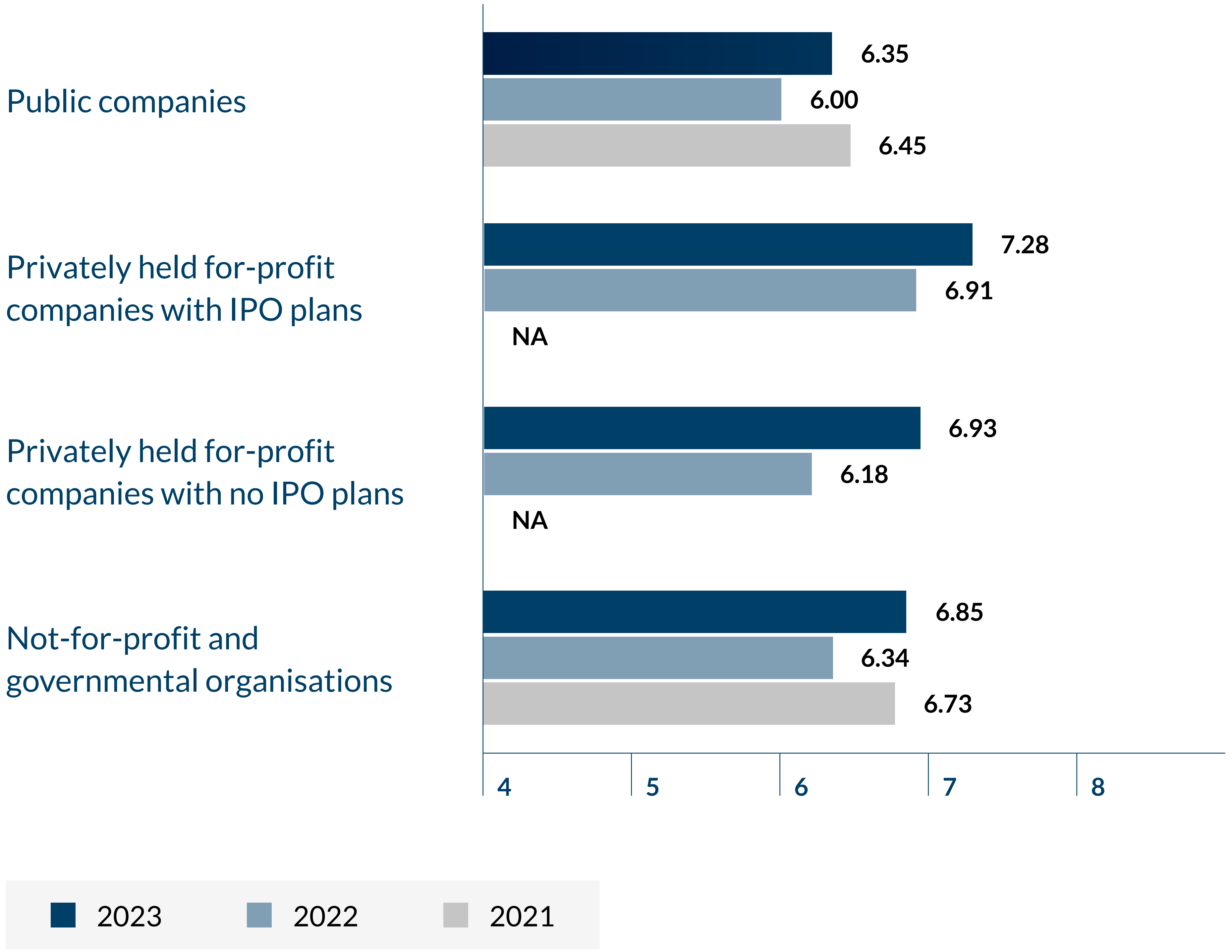
M Macroeconomic Risk Issue **S** Strategic Risk Issue **O** Operational Risk Issue ■ 2032 ■ 2031 ■ 2030

Analysis across public and non-public entities

Participants in the survey represent four types of organisations: publicly traded companies (629 respondents), privately held for-profit entities with plans for an IPO (205 respondents), privately held for-profit entities with no plans for an IPO (340 respondents), and not-for-profit and governmental organisations (130 combined respondents). We analyse responses across these four types of entities to determine whether different types of organisations rank-order risks differently. Similar to our analysis summarised earlier, we analyse responses about overall impressions of the magnitude and severity of risks across the four organisational type categories. Again, the scores reflected in Figure 36 reflect responses to the question about the overall impression of the magnitude and severity of risks using a 10-point scale where 1 = “Extremely Low” and 10 = “Extremely High.”

FIGURE 36

Overall, what is your impression of the magnitude and severity of risks your organisation will be facing with respect to achieving its objectives and reaching or exceeding profitability (or funding) targets over the next 12 months?



All four entity types agree that the overall magnitude and severity of risks are of a "Significant Impact" level in 2023.

Figures 37-40 highlight the top five risks identified by each type of organisation.

2023 risk concerns

The top five risks across the four groups are reasonably consistent. All four groups rank succession and talent acquisition and retention among their top three risks, with all but private companies with no IPO plans ranking it as their highest risk issue. In addition, economic conditions in markets currently served is the first- or second-ranked risk concern for all but the governmental/not-for-profit entities in our sample. Not-for-profit and governmental organisations and private companies with no IPO plans both identify increased labour costs as their second highest risk concern.

For the most part, macroeconomic and operational risk concerns dominate the top five risk issues for all organisations. Both public companies and private companies with no IPO plans identify only macroeconomic and operational risk in their top five, while private companies with IPO plans and governmental/not-for-profit entities both include only a single strategic risk among their top five risk concerns for 2023. For private companies with IPO plans, the risk of limits to organic growth opportunities is their third highest-ranked risk, while for governmental/not-for-profit organisations it is the threat of regulatory change and heightened scrutiny.

As noted, within the privately held for-profit category, we captured responses from participants who classified their respective organisations as either "preparing to become publicly held" or "no current plans to become publicly held." We observed a number of major differences between these two groups. Across the board, risk scores among organisations planning to go public are substantially higher compared with organisations not planning to become publicly held. For 2023, organisations planning a public offering rated 35 of the 38 risks at the "Significant Impact" level. Of note, for those organisations with no plans to become public companies, only three of 38 risk issues are rated at the "Significant Impact" level. This is an interesting distinction, as those companies preparing to go public are getting ready for increased stakeholder scrutiny and raising their line of sight on the need for improved infrastructure in many areas. Thus, as the survey results suggest, their sensitivity to risk is higher.

For the most part, macroeconomic and operational risk concerns dominate the top five risk issues for all organisations.

2032 risk issues

There are universal concerns about succession and talent challenges continuing into the next decade, with that issue in the top two risks for 2032 for each of the organisation types. The adoption of digital technologies and its implications for reskilling and upskilling existing employees is viewed as the top risk for 2032 by public companies and is ranked second by private companies with no IPO plans. Rapid speed of disruptive innovations enabled by advanced technologies appears as a top five risk for all but private companies with IPO plans (although that risk is identified as "Significant Impact" for these companies as well).

Similar to our findings for 2023, private companies with IPO plans have the riskiest outlook for 2032 — and by a wide margin. These companies rank 35 of the 38 risks at the "Significant Impact" level while governmental/not-for-profit entities identify 11 risks at that level. Private companies without IPO plans rank just five of the 38 risks at the "Significant Impact" level and public companies have only two ranked 6.0 or higher. Unlike the 2023 results, each of the organisation types includes at least one strategic risk in their top five, with private companies anticipating an IPO and governmental/not-for-profit entities both reporting a strategic risk as their top risk concern for 2032.

> *There are universal concerns about succession and talent challenges continuing into the next decade.*

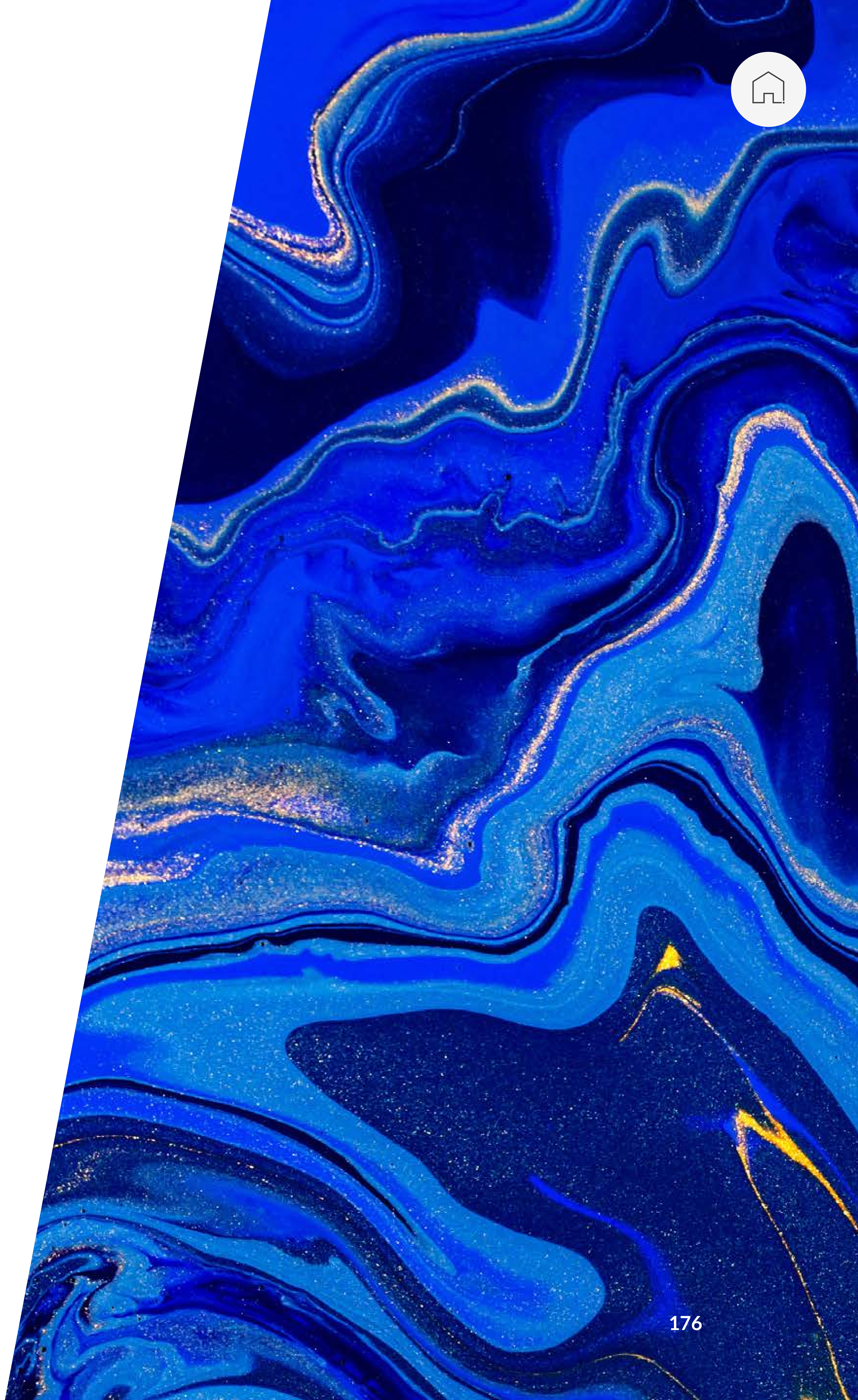


FIGURE 37A

Public companies — 2023

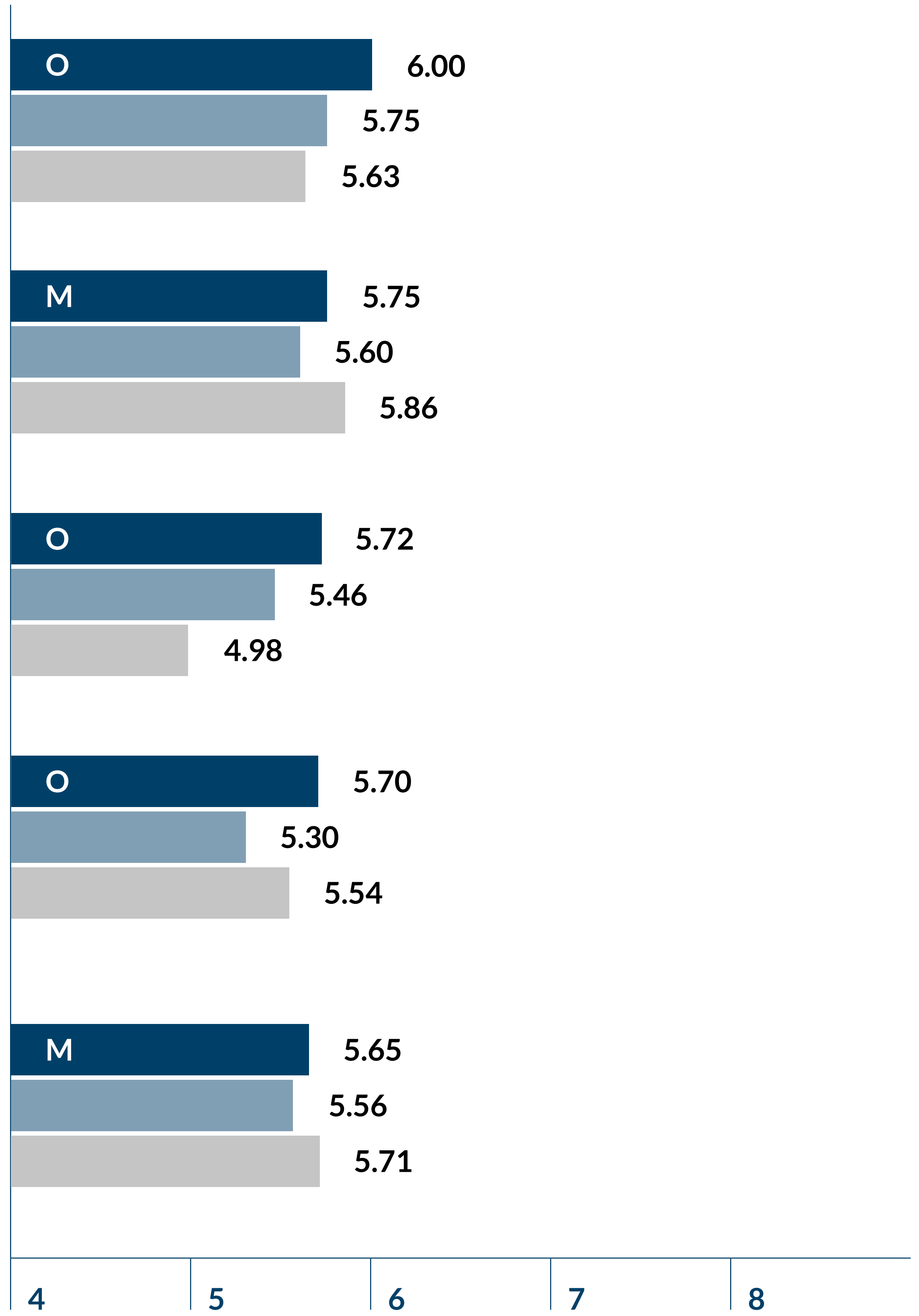
Our organisation's succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

Uncertainty surrounding our organisation'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

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

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 organisation 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



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

FIGURE 37B

Public companies — 2032

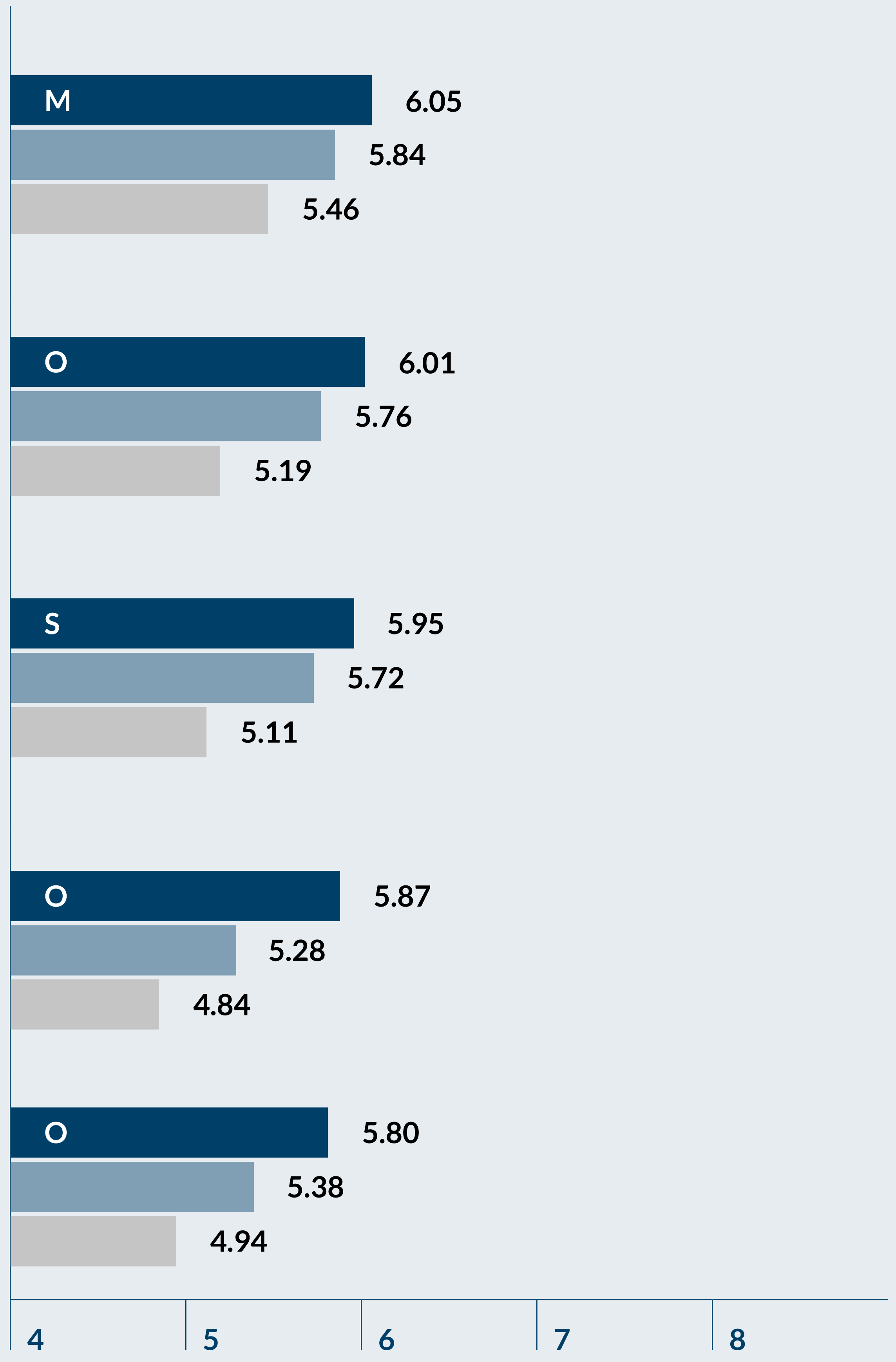
The adoption of digital technologies (e.g., artificial intelligence, automation in all of its forms, natural language processing, visual recognition software, virtual reality simulations) in the marketplace and in our organisation may require new skills that either are in short supply in the market for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

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

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 organisation'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 organisation from making necessary adjustments to the business model and core operations on a timely basis

Our organisation 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



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

FIGURE 38A

Privately held for-profit companies with IPO plans — 2023

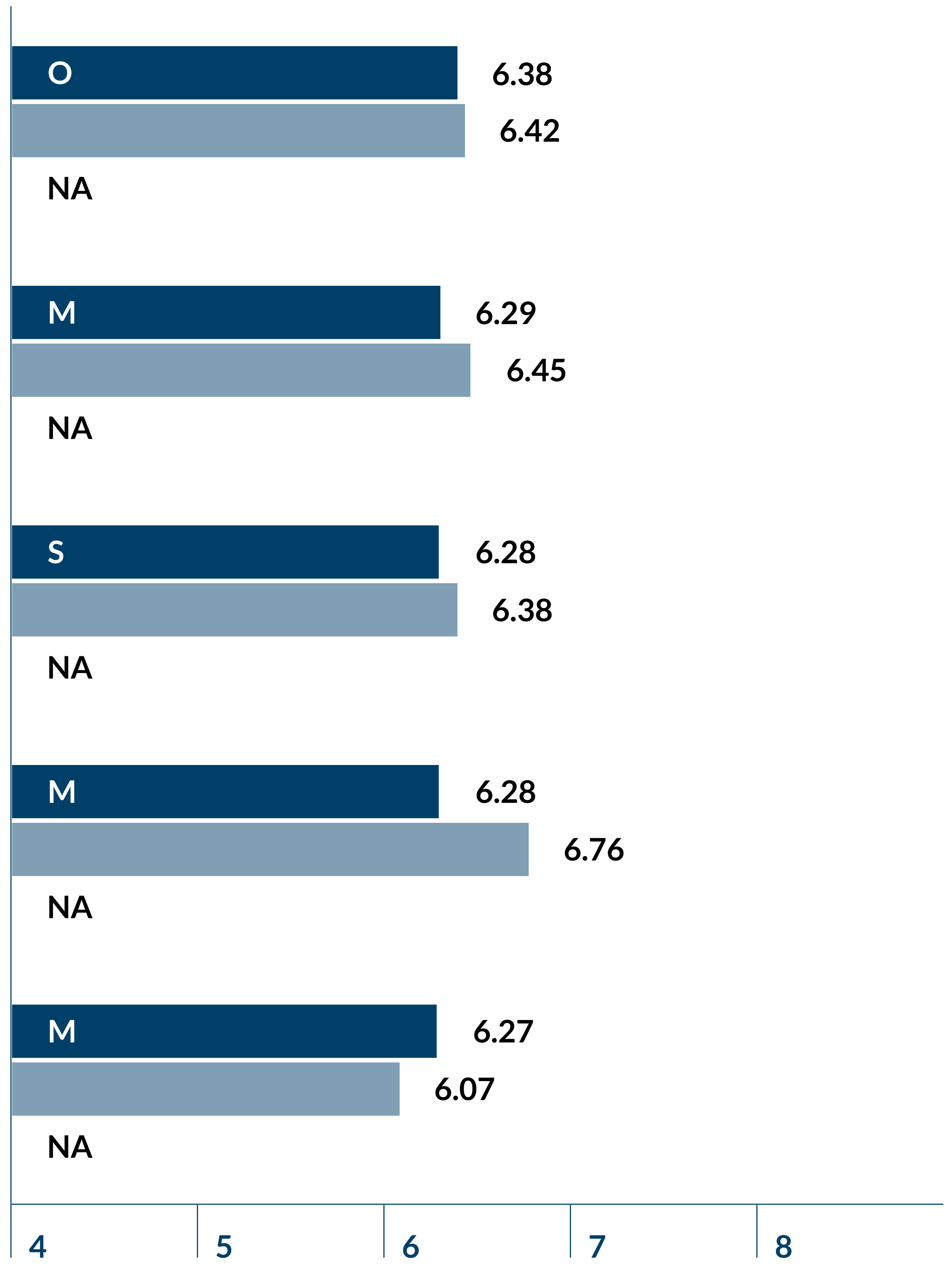
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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

Opportunities for organic growth through customer acquisition and/or enhancement may be significantly limited for our organisation

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

The current interest rate environment may have a significant effect on the organisation’s capital costs and operations



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

FIGURE 38B

Privately held for-profit companies with IPO plans — 2032

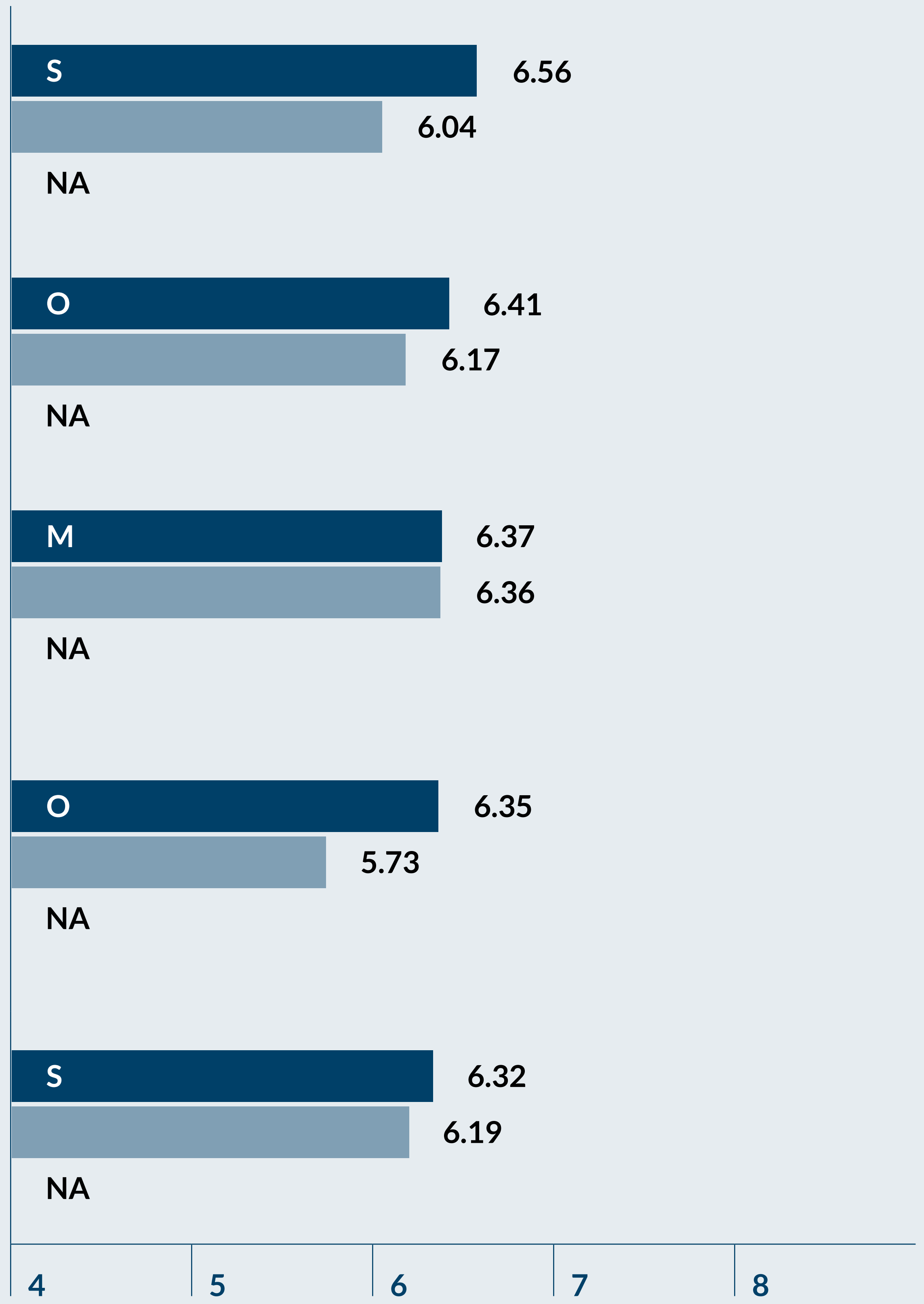
Sustaining customer loyalty and retention may be increasingly difficult due to evolving customer preferences and/or demographic shifts in our existing customer base

Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour 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 organisation

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

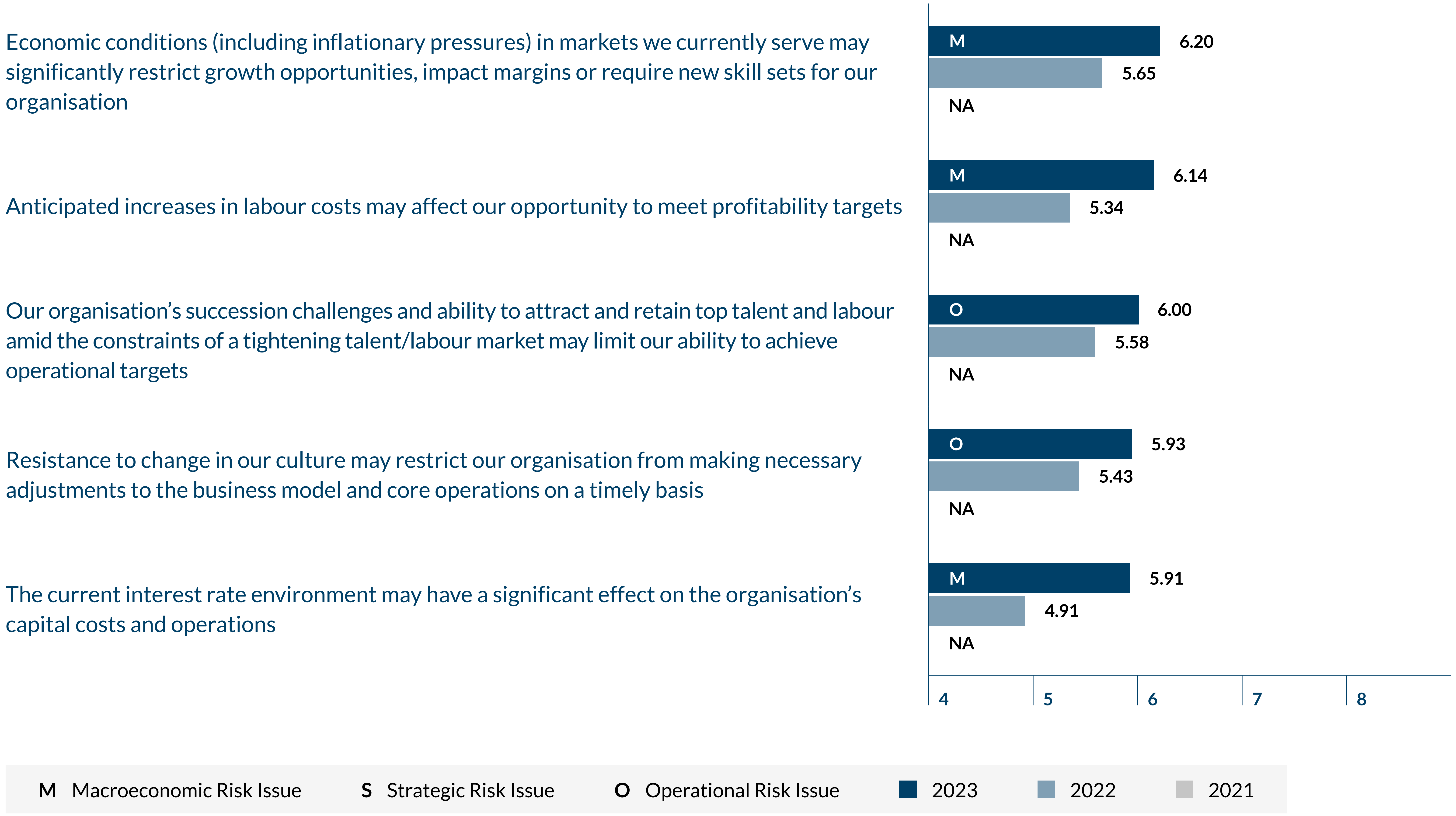
Ease of entrance of new competitors into the industry and marketplace or other significant changes in the competitive environment (such as major market concentrations due to M&A activity) may threaten our market share



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

FIGURE 39A

Privately held for-profit companies with no IPO plans — 2023



Economic conditions (including inflationary pressures) in markets we currently serve may significantly restrict growth opportunities, impact margins or require new skill sets for our organisation	M	6.20	5.65	NA
Anticipated increases in labour costs may affect our opportunity to meet profitability targets	M	6.14	5.34	NA
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets	O	6.00	5.58	NA
Resistance to change in our culture may restrict our organisation from making necessary adjustments to the business model and core operations on a timely basis	O	5.93	5.43	NA
The current interest rate environment may have a significant effect on the organisation’s capital costs and operations	M	5.91	4.91	NA

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

FIGURE 39B

Privately held for-profit companies with no IPO plans — 2032

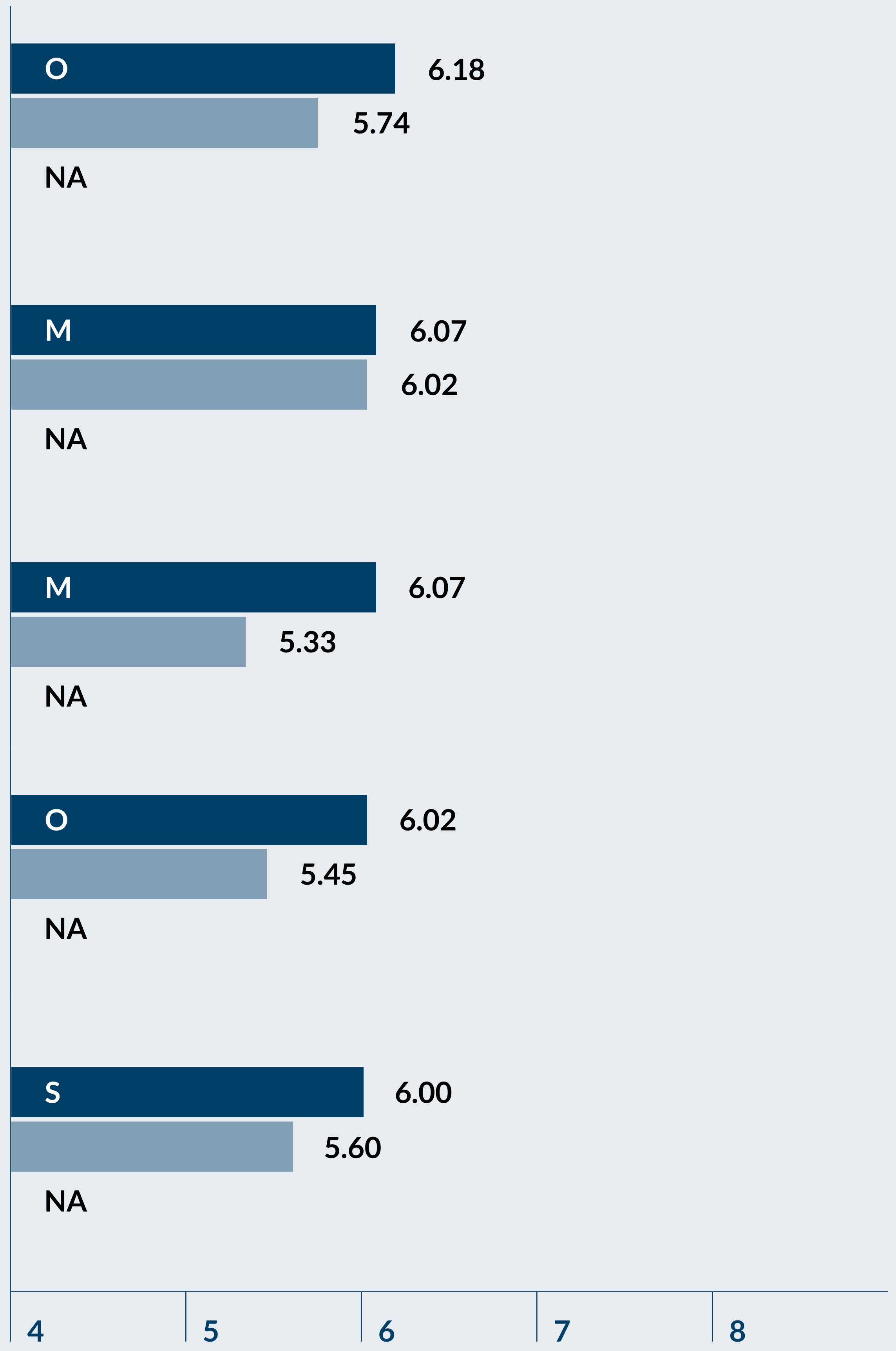
Our organisation’s succession challenges and ability to attract and retain top talent and labour amid the constraints of a tightening talent/labour market may limit our ability to achieve operational targets

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 organisation 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

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

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

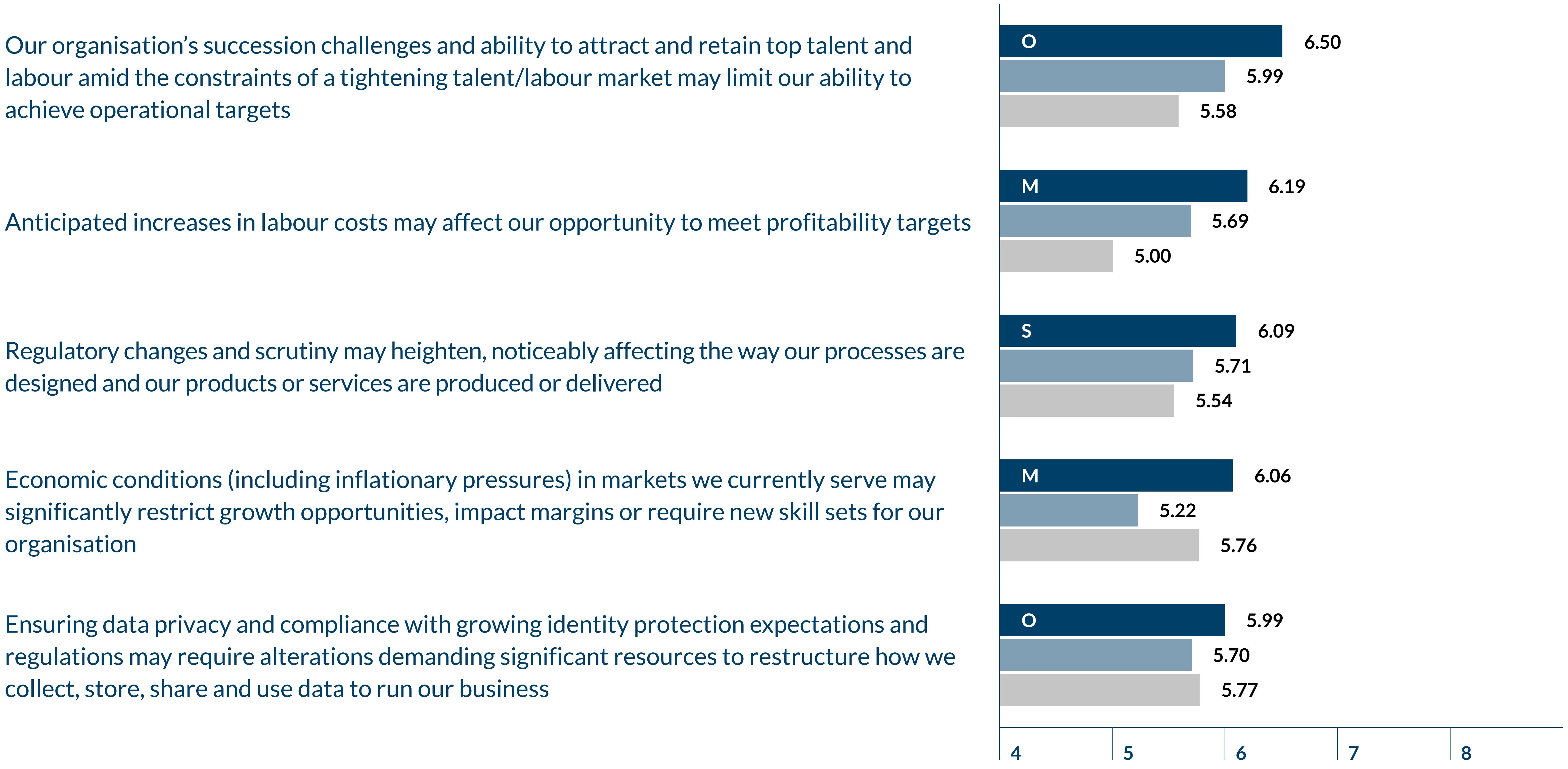
Rapid speed of disruptive innovations enabled by advanced technologies (e.g., artificial intelligence, automation in all of its forms, hyper-scalable platforms, faster data transmission, quantum computing, blockchain, digital currencies and the metaverse) and/or other market forces may outpace our organisation’s ability to compete and/or manage the risk appropriately, without making significant changes to our business model



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

FIGURE 40A

Not-for-profit and governmental organisations — 2023



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

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

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

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

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 ■ 2023 ■ 2022 ■ 2021

FIGURE 40B

Not-for-profit and governmental organisations — 2032

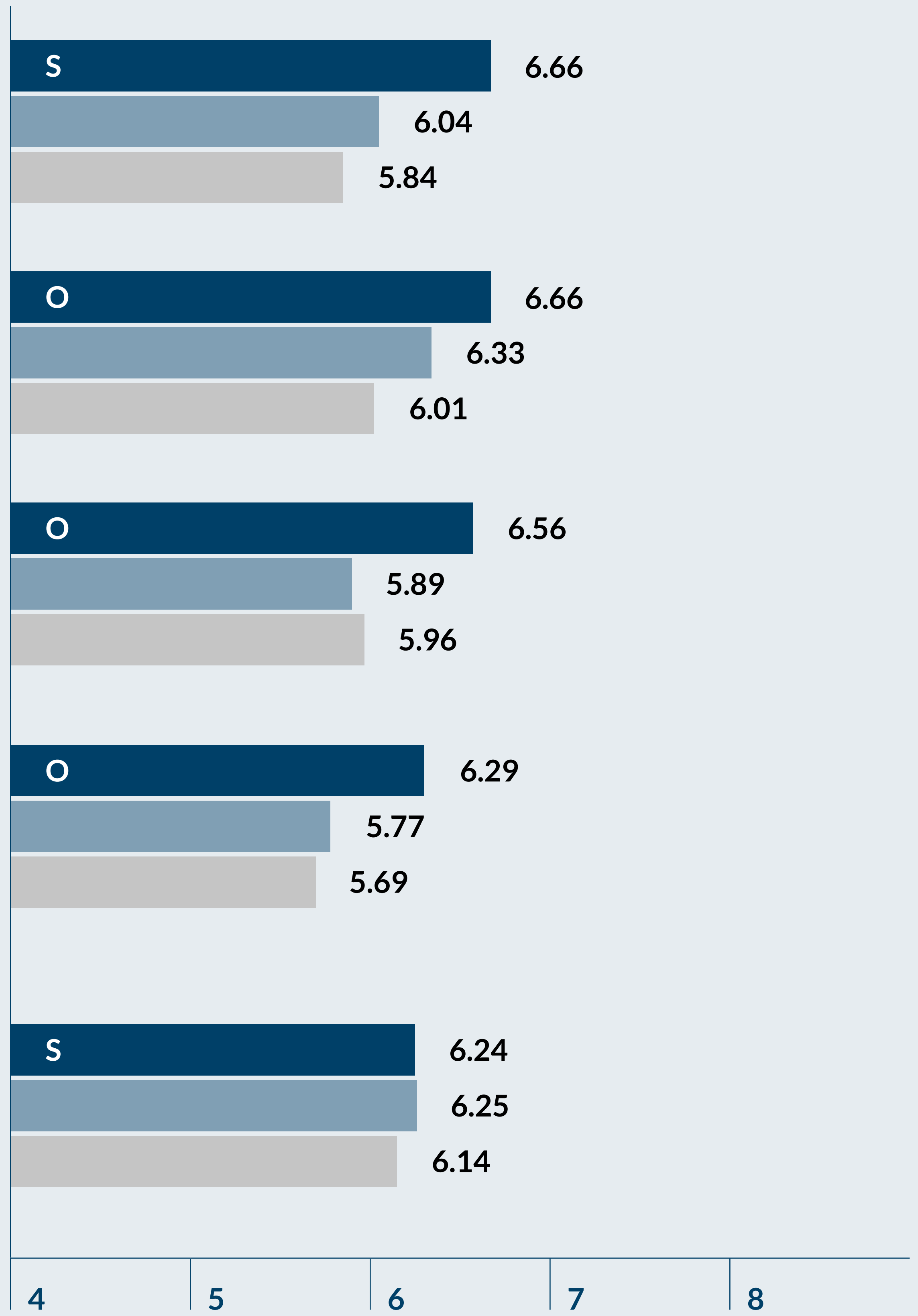
Regulatory changes and scrutiny may heighten, noticeably affecting the way our processes are designed and our products or services are produced or delivered

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

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 organisation 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

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 organisation's ability to compete and/or manage the risk appropriately, without making significant changes to our business model



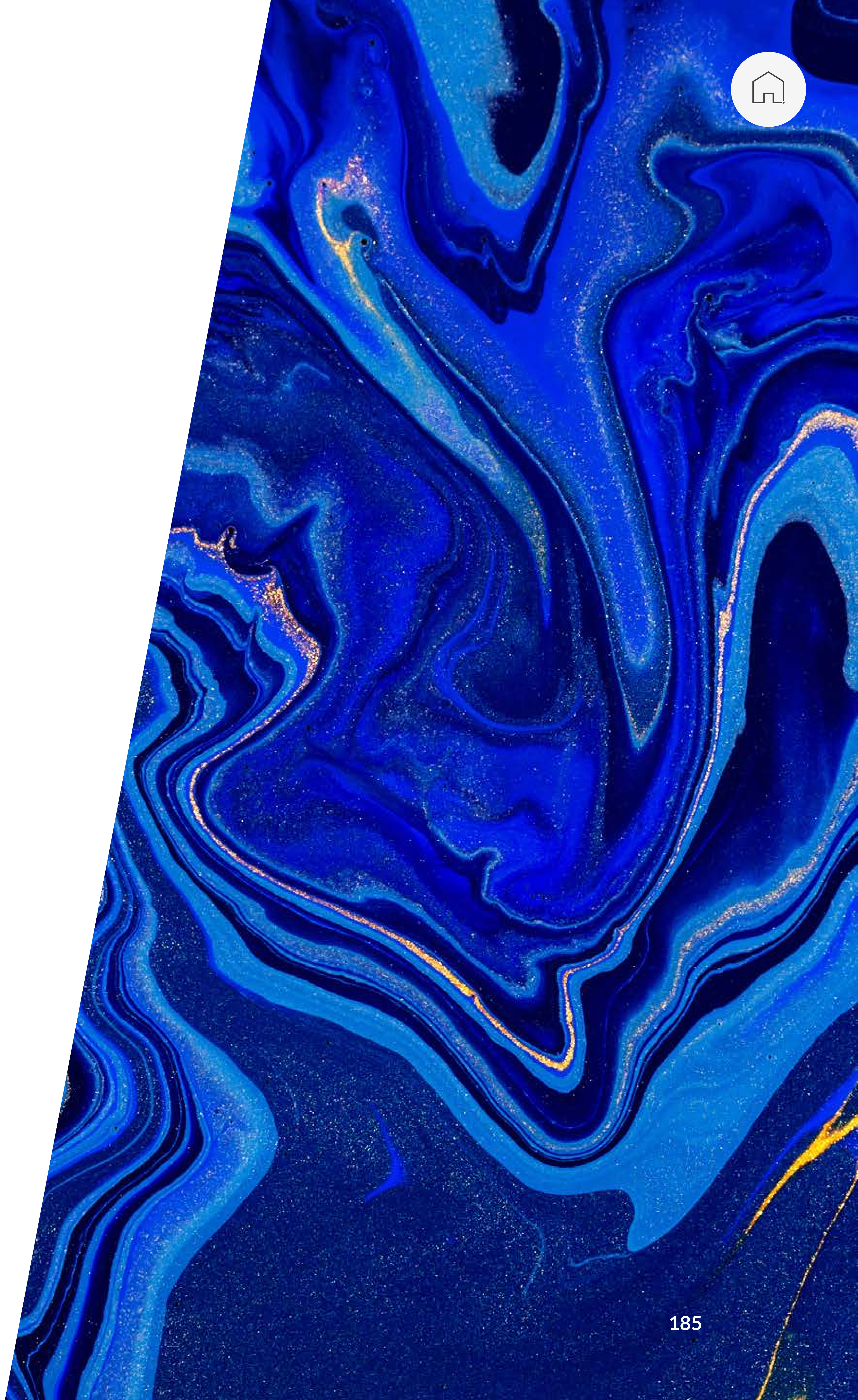
M Macroeconomic Risk Issue **S** Strategic Risk Issue **O** Operational Risk Issue ■ 2032 ■ 2031 ■ 2030

Responses to open-ended question on emerging risk areas

In our survey, we also invited respondents to answer an open-ended question seeking additional emerging risk areas specific to their organisation looking ahead 10 years. Participants were able to list any emerging risk issue, such as extreme but plausible events they envision, significantly affecting their organisation that they believed were not captured explicitly in the other survey questions they answered.

Specifically, we asked:

Looking ahead 10 years, are there additional emerging risk areas specific to your organisation that we have not addressed? If so, please list any other emerging risk issues (such as extreme but plausible events you envision) significantly affecting your organisation that were not captured in the prior questions.



We received over 240 responses. The word cloud on this page visually portrays the text of the participants’ responses.

The words in the cloud that appear largest are the ones mentioned most by the participants, offering insights on trends and patterns in the responses received. Interestingly, most of the statements noted in the cloud relate directly to many of the 38 risk issues the participants were asked to rate in our study. Given that the exercise gave the participants the opportunity to express in their own words what was top of mind for them as they looked out 10 years, the results validate the completeness of the 38 risks they rated in our survey. Interestingly, “changes” is the most common word followed by predominant words — technology, organisation, security, government, regulatory, market, cyber, political, emerging, customer, war, energy, environment, global, costs, people, employees, inflation, instability and climate — that add context to the kind of changes on the minds of directors and executives as they consider risks 10 years out. Again, these themes also relate to a number of risks ranked highly in our overall survey results, as we have discussed in this report.

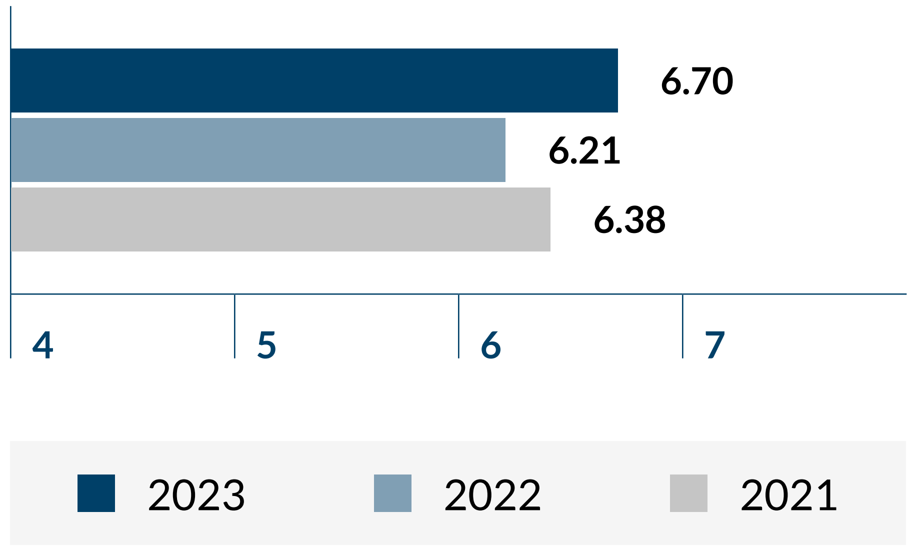
One interesting point is that “climate” was not as predominant as in our prior two surveys when we began offering this open-ended question. This may be due to the emergence of other pressing global issues. In addition, a climate-change-related question has been included among the risks rated in our survey.

Plans to deploy resources to enhance risk management capabilities

Recall that we asked respondents about their overall impression of the perceived magnitude and severity of risks to be faced in 2023. (Note that we did not ask participants to consider this for 2032.) As illustrated by Figure 41, the average overall response indicates a perceived increase in the nature of the overall risk environment, with an average score of 6.70 in 2023 relative to 6.21 in 2022 and 6.38 in 2021. As mentioned earlier, this is the highest recorded level for this question we have encountered in the 11-year history of our annual top risk reports.

FIGURE 41

Magnitude/severity of risks



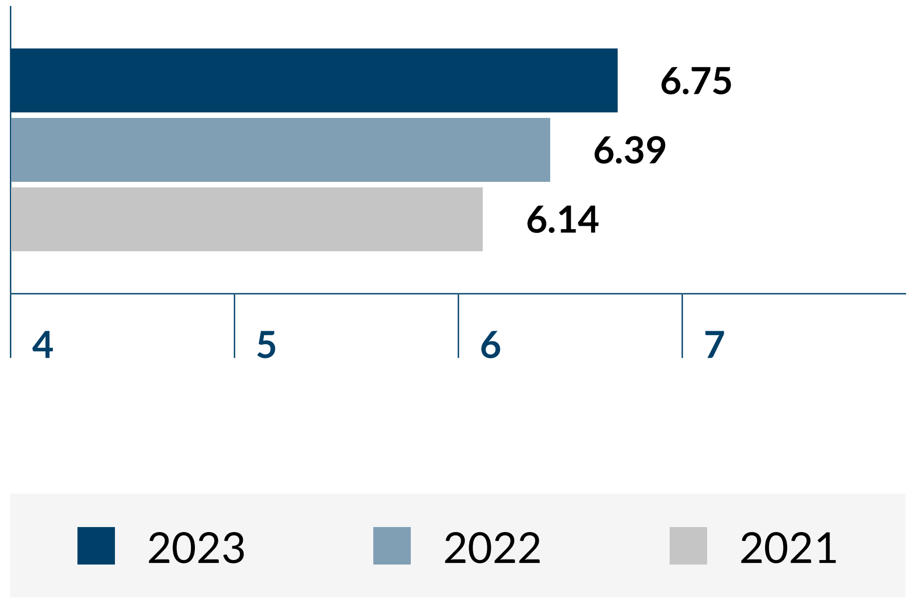
We also asked executives to provide insights about whether their organisation plans to devote additional resources to improve risk management over the next 12 months. We used a 10-point scale, whereby 1 signifies "Extremely Unlikely to Make Changes" and 10 signifies "Extremely Likely to Make Changes."

Consistent with the marked increase in the perception of the risk environment, respondents indicate a higher likelihood of deploying more resources to risk management in 2023 relative to 2022 (and 2021), as reflected by Figure 42.

Given the confluence of multiple, complex and interrelated risks, as reported above, we are not surprised by this result. There continues to be a need to invest in more robust risk management capabilities, especially in light of the past three years of pandemic-related risk concerns. The pandemic experience has highlighted the need for preparedness and agility as well as demonstrated that companies can innovate within a fraction of pre-pandemic project timelines. Furthermore, as it unfolded it may have shifted the focus away from improving risk management infrastructure, especially in those industries where surviving the crisis was the primary focus.

FIGURE 42

Likely to devote additional resources to risk management

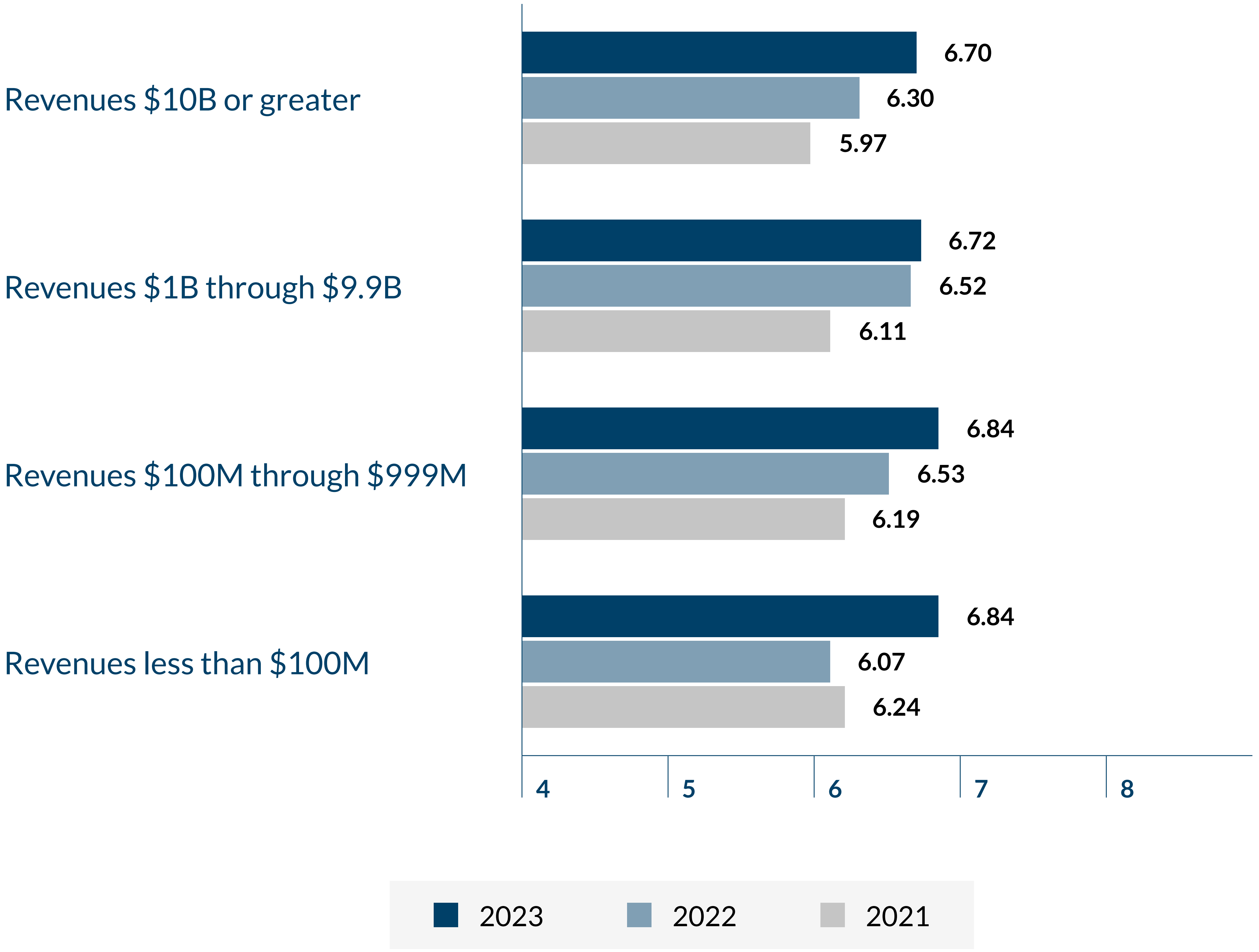


Organisation size analysis

We also analyse responses to these questions across different sizes of organisations. This year we observe that all organisations indicate an increase in the likelihood of greater investment in risk management resources, and for all but the smallest firms (with revenues less than $100 million) this is the second consecutive year of planned increases in investment in 2023 relative to 2022 and 2021.

FIGURE 43

How likely or unlikely is it that your organisation will devote additional time and/or resources to risk identification and management over the next 12 months?

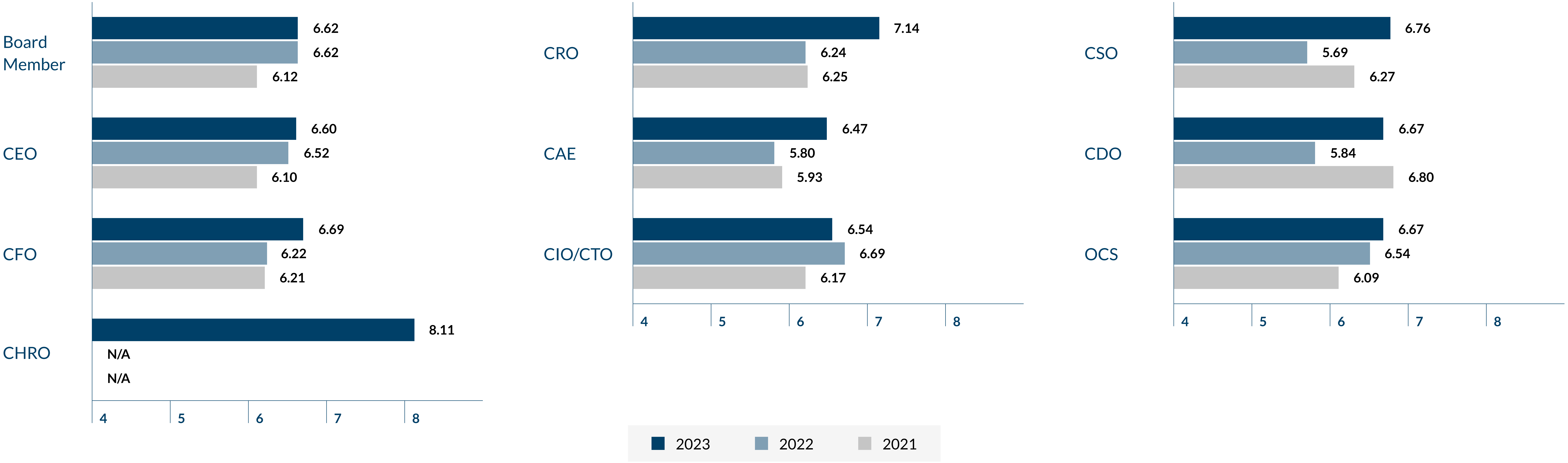


Respondent position analysis

Interestingly, most positions indicate an increase in the likelihood of committing enhanced resources to risk management capabilities in 2023, with the exceptions being board members (who indicate the same likelihood as expressed in last year's survey for 2022) and CIOs/CTOs. Our new group added this year, CHROs, exhibits the highest level of likelihood of increased investment in the coming year. This is no doubt driven by the fact that succession challenges and talent acquisition and retention is identified as the top risk concern for 2023.

FIGURE 44

How likely or unlikely is it that your organisation will devote additional time and/or resources to risk identification and management over the next 12 months?

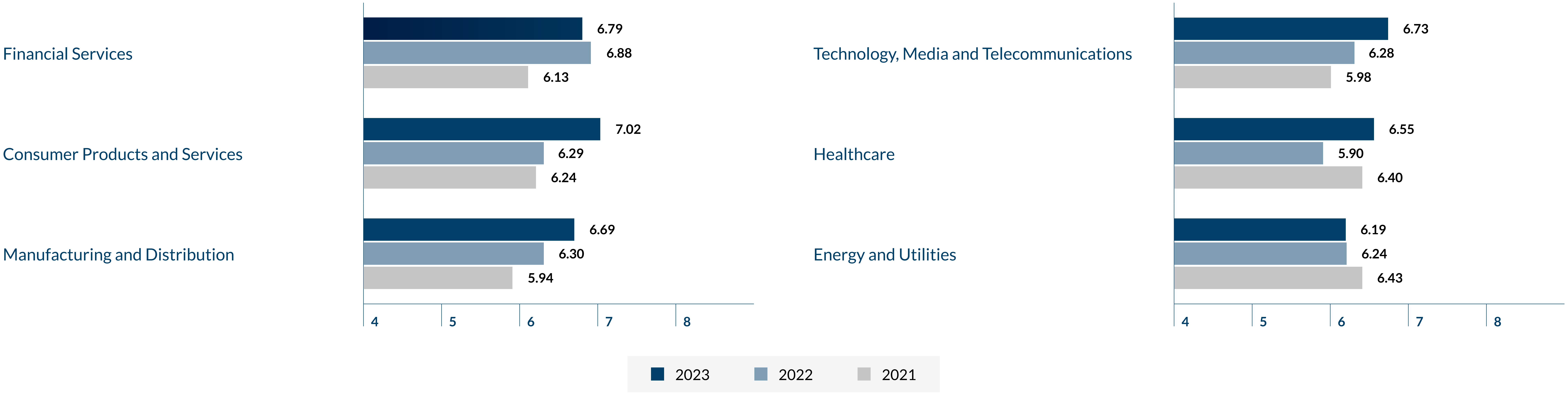


Industry analysis

The Financial Services and Energy and Utilities industry groups both expect modest reductions in the level of investment in 2023 relative to 2022. This may simply reflect the increased investments already made in 2022 as indicated in last year's numbers. The Consumer Products and Services industry group leads in both absolute terms for 2023 (7.02) and in the magnitude of the increase from 2022 expectations (an increase of 0.73). The Manufacturing and Distribution, Technology, Media and Telecommunications, and Healthcare industry groups all indicate a higher likelihood to invest more in risk management capabilities in 2023 relative to 2022.

FIGURE 45

How likely or unlikely is it that your organisation will devote additional time and/or resources to risk identification and management over the next 12 months?

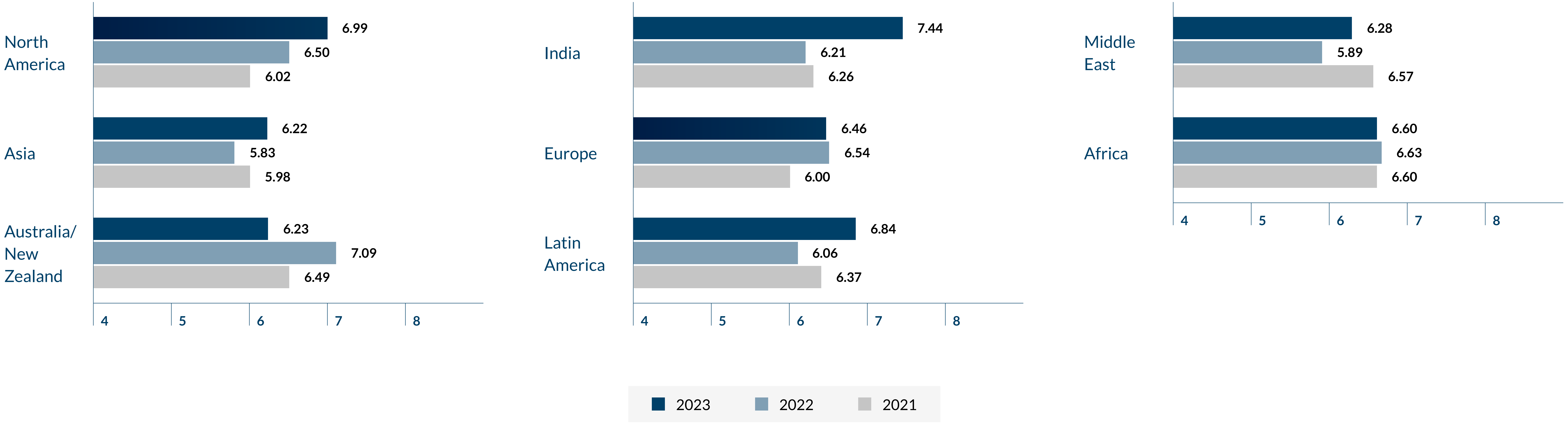


Geographic region analysis

Organisations with headquarters based in India, North America and Latin America indicate the greatest likelihood that they will devote additional resources to risk management in 2023, with all signalling a significant increase relative to 2022. Organisations headquartered in Australia/New Zealand and Europe indicate a reduced likelihood of additional investment in risk management capabilities as compared to the 2022 results, perhaps caused by the increased investments they forecast for 2022 in our prior year report. Organisations headquartered in Australia/New Zealand exhibit the largest decrease (from 7.09 in 2022 to 6.23 in 2023).

FIGURE 46

How likely or unlikely is it that your organisation will devote additional time and/or resources to risk identification and management over the next 12 months?

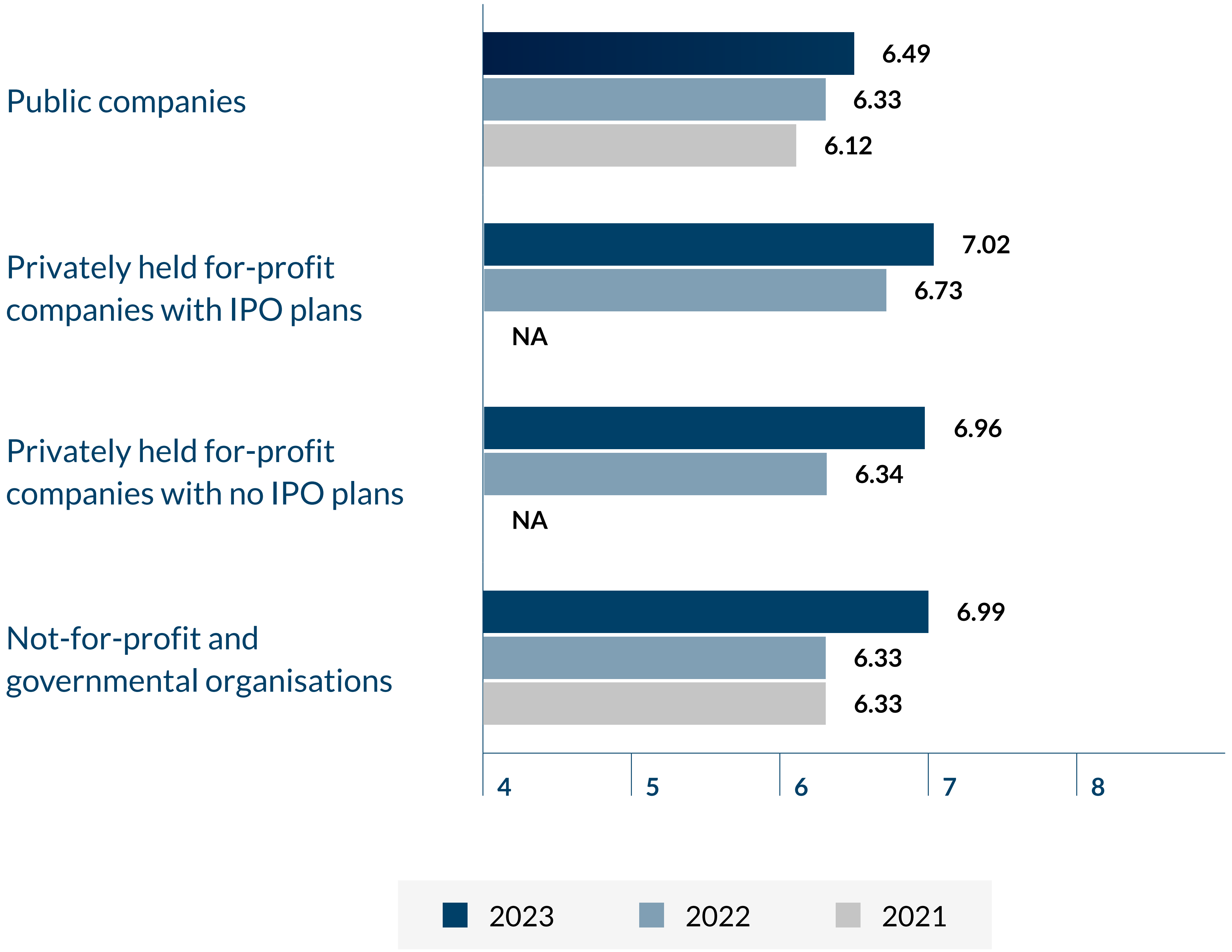


Organisation type analysis

All four of our organisation types indicate higher levels of likelihood that they will invest more time and resources in building out their risk management infrastructure in 2023 relative to 2022 (and 2021 for public companies). Private companies that anticipate going public express the highest degree of likelihood for increased investment in 2023 (7.02). Not-for-profit and governmental organisations indicate the highest increase in the likelihood of additional investment in 2023 (6.99 vs. 6.33 in 2022).

FIGURE 47

How likely or unlikely is it that your organisation will devote additional time and/or resources to risk identification and management over the next 12 months?



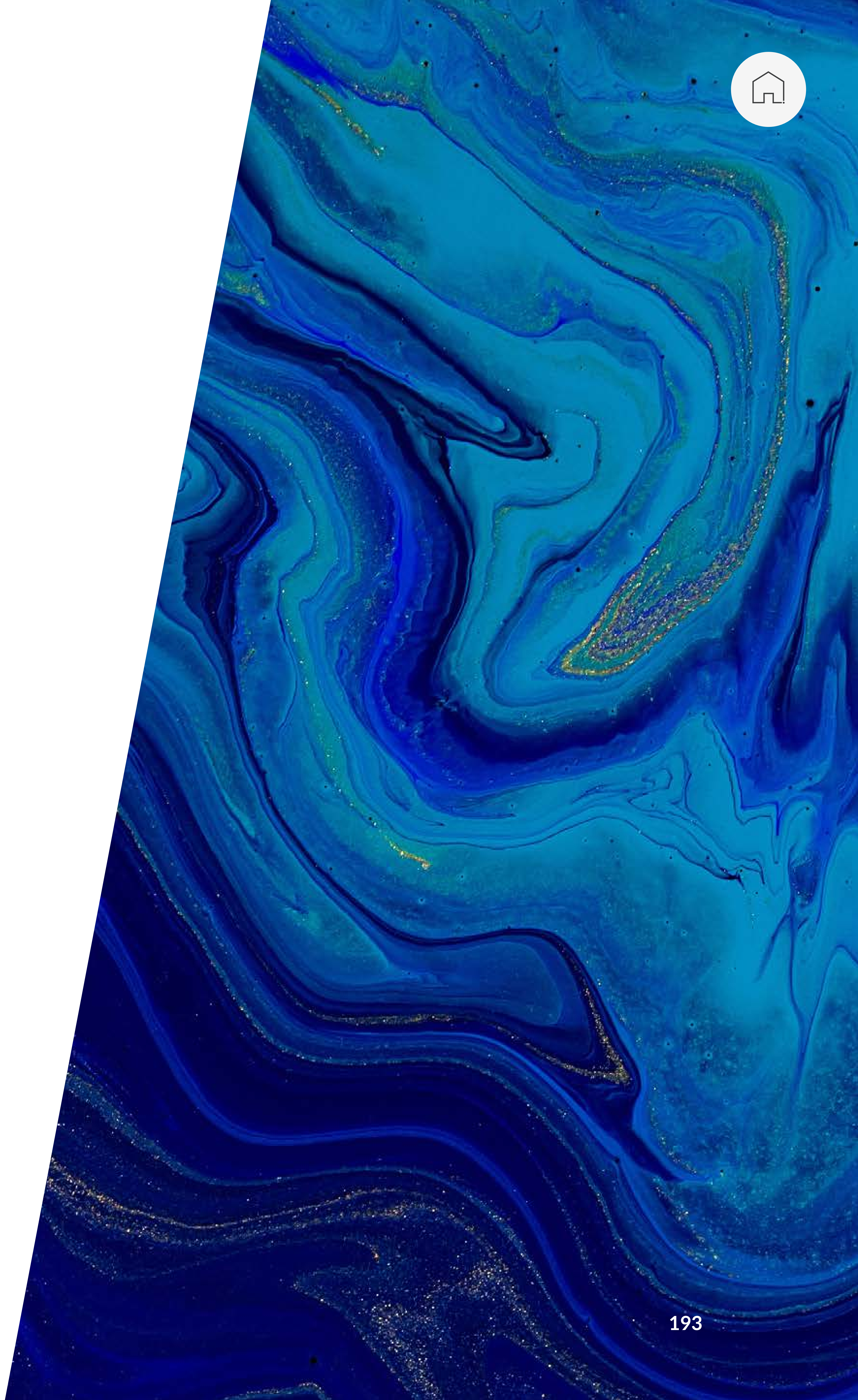
Evaluating an organisation's approach to risk oversight

This report provides insights from 1,304 board members and executives about risks that are likely to affect their organisations 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 scrutinise the approaches they use to keep an eye on risks emerging around the corner.

Unfortunately, some organisations 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 organisations, 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 organisation's risk appetite leaves decision makers across the organisation to their own devices. Soon those organisations may realise, 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 organisations 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 organisation 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 organisation'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 organisation'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 organisation 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 organisation 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 organisation's approach to risk management?
  - Was our organisation prepared to deal with the challenges we have experienced over the last two years?
  - Was our organisation'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 organisation's operations:

- Are we centering our focus on risks in the context of our organisation'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 organisation'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 organisation 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 organisation (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 organisation'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 organisation's risk profile?
    - Is there actionable, current risk information that is widely shared to enable more informed decision-making across the organisation?
    - 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 organisation 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 organisation's risk profile?
- With respect to the most critical risks facing the organisation, do directors understand, at a high level, the organisation'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 organisation's appetite for risk and whether the organisation'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 organisation'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 organisation'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 organisation?
  - 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 organisation'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 organisation'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 organisations 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 report 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 organisations.

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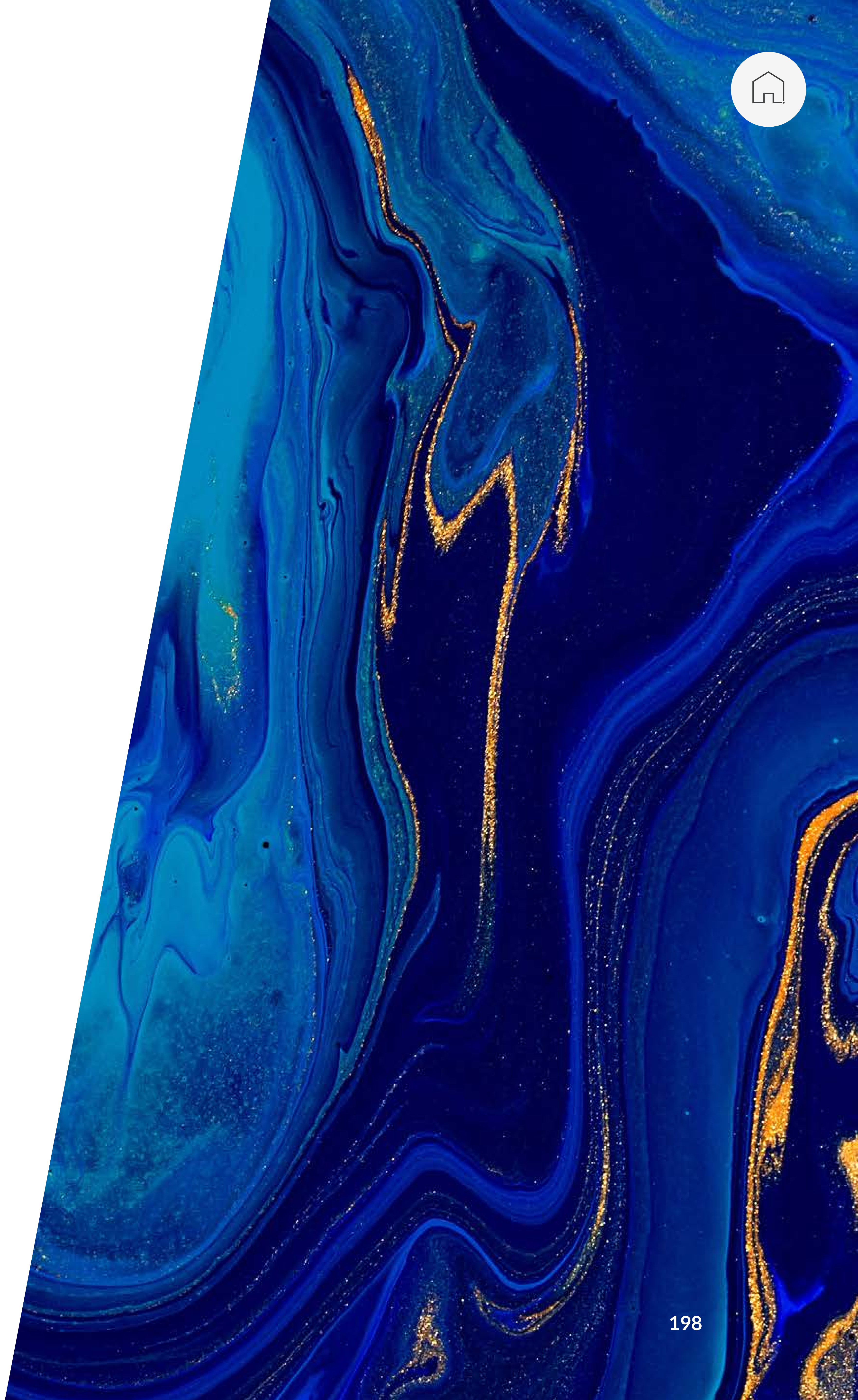

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About NC State University's ERM Initiative

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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