

Global Risk Landscape 2024

# Antifragility: Risk as a driver for success



# Foreword

## Organisations must start seeking opportunity in risk amid a time of persistent disruption



**Colin Calleja**  
Director of Risk, BDO Malta  
colin.calleja@bdo.com.mt

The more things change, the more they stay the same, as the old French saying goes. But not when it comes to risk.

The more change that takes place, the more risk that organisations face. And change is now happening at a faster and more frequent tempo than ever.

Having mostly put COVID-19 in the rear-view mirror, businesses are experiencing déjà-vu, with supply chain risk back on the agenda amid rising global tensions. Attacks by Yemeni rebels mean cargo from Asia bound for Europe is being diverted around South Africa instead, adding weeks to journey times. Economic conditions also remain choppy, with organisations having to contend with inflationary pressures impacting production costs and their customers' buying power.

A wave of global elections is further adding to the uncertainty, particularly when it comes to regulation. The pace of regulatory change has already quickened: organisations are often forced to comply with rules imposed not only by domestic regulators, but foreign ones too.

For organisations to navigate this environment they must now be alive to the risks they face but agile enough to respond in a way that keeps their business moving forward.

Historically, most businesses have looked at risk in a negative way, as a threat to be minimised. But in a time of constant change, they need to embrace risk to seek advantage if they want to avoid standing still. In other words, they need to view risk not as a threat, but as an opportunity.

There can be opportunities for businesses to use risk to gain advantage and do social good, even in the most catastrophic of scenarios. Consider the case of Hurricane Katrina. As it made landfall, government agencies couldn't deploy resources and deliver supplies to stranded people - but companies like

Walmart and Home Depot realised ahead of time that they could. Marshalling their people and stocking up on emergency supplies, these companies could see the opportunity within the risk to support local communities in their time of need.

To adopt this mindset, businesses need to become more like downhill Olympic skiers. They need to be able to flow and adapt at speed and anticipate the challenges in their path to gain an advantage over their competitors. Those that don't take this approach will come off worse for wear because they are too slow on their feet and can't react fast enough.

# 84%

**of business leaders say the global risk landscape is now more defined by crisis than at any time in recent memory**



# Executive Summary

Disruption is recurring at an unprecedented pace. Are organisations able to thrive in this era of permanent crisis?

The global risk landscape is now more defined by crisis than at any point in recent memory, according to 84% of respondents in our survey. This is putting enormous pressure on organisations as they move from one crisis to the next. Some 60% of business leaders say risk velocity is increasing, making it hard for businesses to keep up.

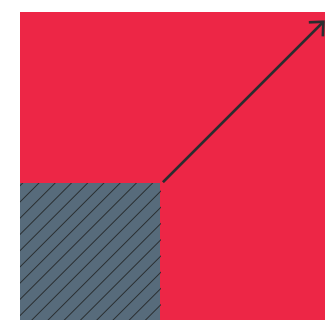
### Evolving risk priorities

Against this fast-moving backdrop, there has been a considerable shift in the risks for which business leaders feel unprepared. Compared to one year ago, regulatory risk climbed 13 places to the number one spot, the most precipitous rise in a single risk we have recorded in the last three years, with 37% of respondents flagging it as a major concern compared to just 7% last year. Technological developments may be spearheading that risk, though a spate of elections in major economies this year may also be feeding into this significant shift. Supply chain risk edged up one place to second (ships being sunk by Yemeni rebels in the Gulf of Aden), while geopolitical tensions rose three places to third (Russia's ongoing war on Ukraine and the conflict in the Middle East).

Cyber risk — the second-biggest risk cited in 2023 — dropped to fifth. And environmental risk — one of the risks business leaders said they were most unprepared for last year — tumbled to ninth. This underscores how quickly risk priorities can shift against a backdrop of constant disruption.

### An antifragile approach

The need for solutions to thrive in the chaos of this unpredictable operating environment is the main theme of our report this year. We believe that for organisations to prosper in times of crisis, they must adopt an 'antifragile'



**5x**

**increase in leaders who feel unprepared for regulatory risks vs 2023**

*See page 14*

mindset, a concept coined by academic Nassim Nicholas Taleb. This describes systems or things that are not only resilient but actually improve when exposed to stress. An antifragile business mindset means seeking opportunity in disruption and turning risk into a competitive advantage.

Almost half of business leaders already perceive their organisations as antifragile, though a deeper examination of the survey data doesn't support those claims. Only 7% of business leaders said their organisations were "risk welcoming" and only 19% said they were very proactive when dealing with risk — key traits of antifragile businesses. Few organisations have the necessary structures to support an antifragile approach to risk — only 26% said they have decentralised decision-making and responsibilities, a characteristic that has made Nvidia, an organisation that fully embodies the antifragility concept, such a success.

### A pullback in AI optimism

Business leaders have also become less optimistic about artificial intelligence (AI): 59% now see it as an opportunity, compared to 83% last year. While that sentiment might be

**61%**



**of leaders now say they are risk averse or minimising risk**

*See page 9*

**44%**



**of business leaders say their organisation is suffering from cyber risk fatigue**

*See page 22*



# 49%

of business leaders describe their organisations as antifragile

grounded in pragmatism after a year of separating hype from reality, an antifragile approach to risk would seek to find those opportunities in AI where being a first mover might yield a competitive advantage.

#### **Managing the rise of regulatory risk**

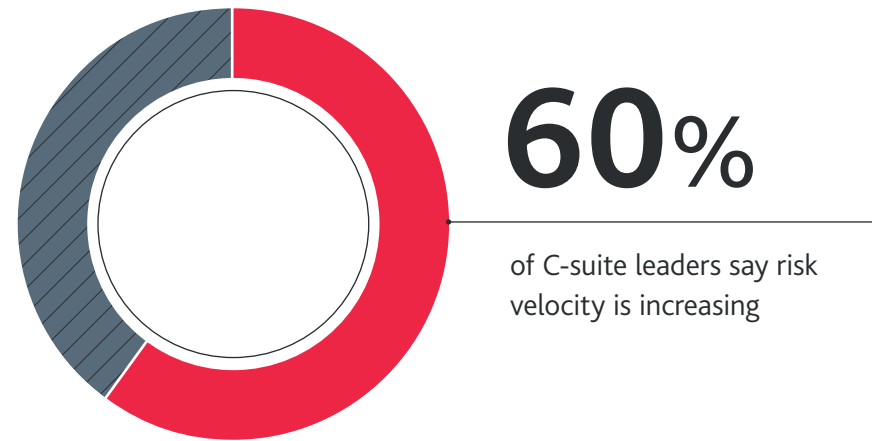
The rise in regulatory and supply chain risks present other opportunities for antifragile businesses to thrive. While their peers pause to implement new compliance obligations or struggle in the face of supply chain disruption, antifragile organisations will already be one step ahead. Regulatory change can create new opportunities for antifragile

businesses, while supply chain delays enable those organisations with better visibility into the layers of their supply chain to either use alternative suppliers or anticipate shortages and load up on inventory before their competitors can react.

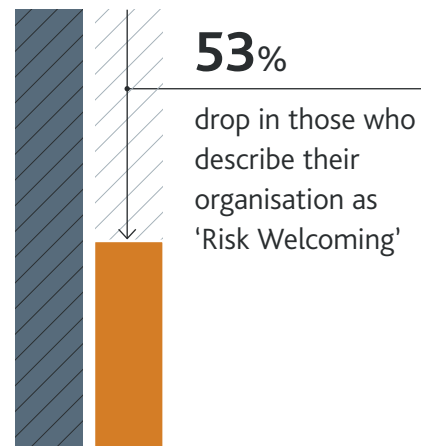
By adopting this antifragile mindset, organisations can start to change the way they think about risk, embracing opportunities and being proactive rather than simply reacting to crises after they have already emerged. This approach can ultimately help businesses thrive in times of disruption and emerge even stronger.

# Contents

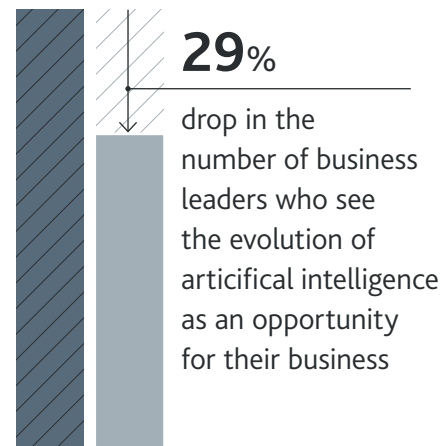
## P5 | The antifragile organisation



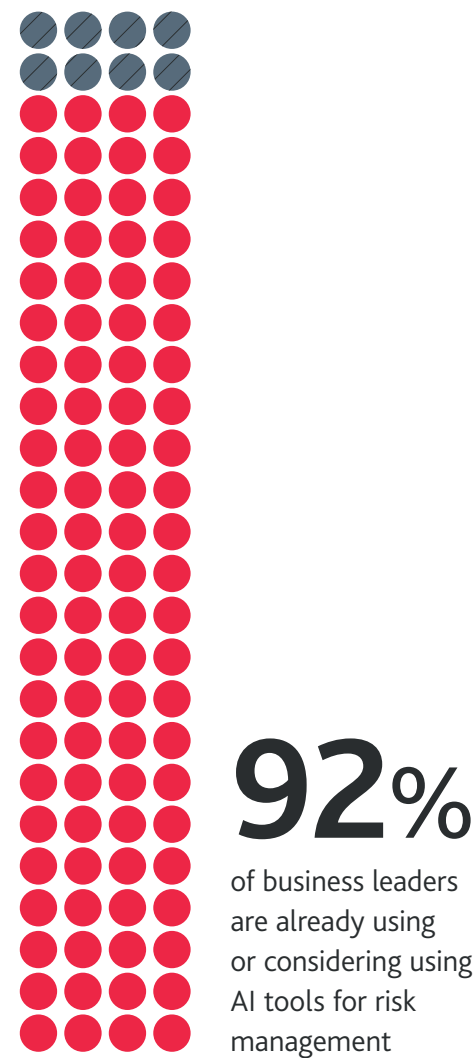
## P7 | Corporate trauma



## P9 | Why has AI optimism faltered?



## P12 | AI for risk management: in search of the promised land



## P13 | Shifting sands: evolving risk priorities

Regulatory risks are now the **No.1** risk business leaders feel their organisations are unprepared for

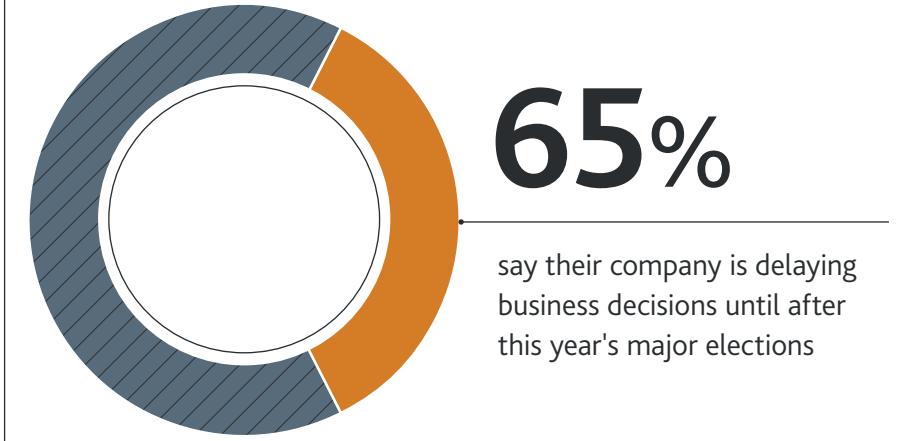
## P15 | Antifragility in practice: lessons from Nvidia

Just **2%** of business leaders say their firm has the three key attributes that helped Nvidia thrive through repeated crises

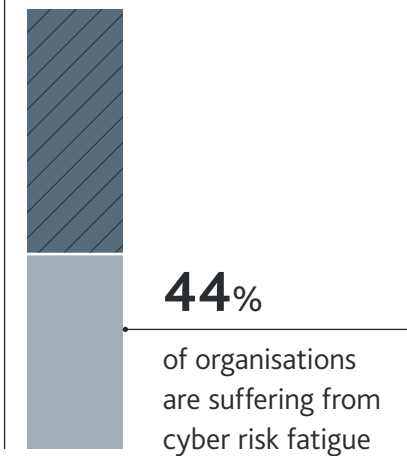
## P17 | Masters of chaos: turning supply chain risk into opportunity

**46%** say they would be willing to embrace supply chain risks to drive competitive advantage

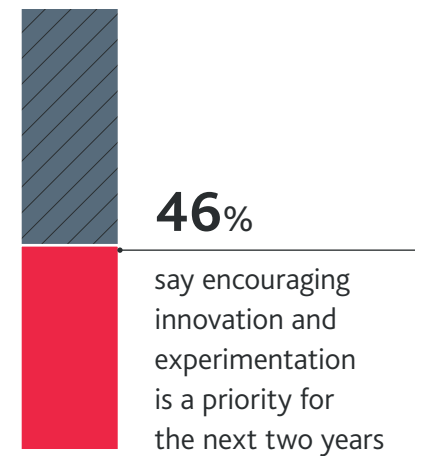
## P19 | Frozen in place: regulatory paralysis



## P21 | Cyber risk fatigue: embracing uncertainty



## P23 | Conclusion



# The antifragile organisation

## The frequency of crises means organisations need to take a new approach to risk and start finding opportunity in disruption

In today's crisis-dominated landscape, risk managers are having to rush in exhaustion from one tumultuous event to the next. Since the disruption of COVID-19, organisations have had to navigate soaring inflation, a rapid increase in interest rates and escalating global tensions that have destabilised supply chains. In this era of near-permanent crisis, it's no longer an option to simply take shelter and wait for the storm to pass.

Against this backdrop, some companies have started to adopt an 'antifragile' approach to risk, one that seeks to find opportunities in crisis rather than merely trying to survive.

Antifragility is a term coined by academic Nassim Nicholas Taleb of 'Black Swan' fame who defines it as systems that thrive in times of disruption. This concept should not be confused with resilience. "The resilient resists shocks and stays the same; the antifragile gets better," he wrote.

For businesses, this means embracing risk and turning disruption into a competitive advantage, helping them become stronger while their peers idle.

"By thinking in a completely different way from your competitors, organisations can turn a crisis into an opportunity and completely displace their competition because of the way they react," says Alisa Voznaya, Director of Risk Transformation, BDO LLP.

The COVID-19 pandemic was one such crisis where some antifragile businesses were able to turn disruption into an opportunity. Take UK tour operator Jet2. In early 2020, just before lockdowns and travel bans decimated the tourism industry, Jet2 boss Steve Heapy decided to take a risk — the company raised £1 billion to invest in staff, new aircraft and a new operating base out of Bristol airport, helping it to grow while its peers retrenched. That pandemic gamble paid off: Jet2 is now the UK's biggest tour operator.

Adopting an antifragile attitude to risk is now more important than ever. The survey shows that 60% of business leaders believe risk velocity — the pace at which organisations are dealing with new risks — is increasing, while another 84% say that the global risk landscape is now more defined by crisis than at any time in recent memory.

In this environment, traditional approaches to risk management are likely to be ineffective.

"Sometimes you can do all the things you need to do by the textbook, but external events are still more powerful than you might imagine, and you are still at the mercy of the market," says Sheraz Afzal, Chief Legal, Risk and Compliance Director at Quint Group, an award-winning UK-based fintech.

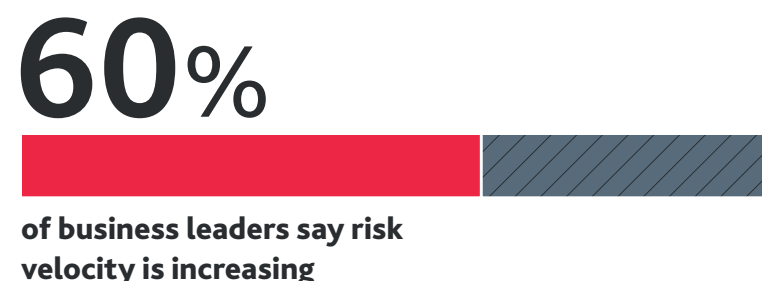
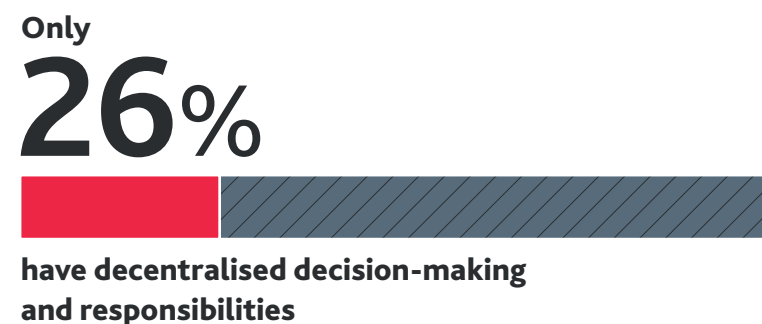
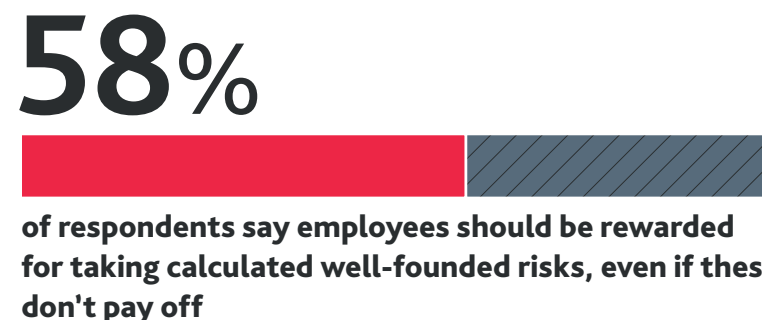
In the past, organisations may have been able to pause and regroup after a crisis and map out how to grow as the broader economy recovered. Yet in an era of 'permacrisis', companies must respond and adapt much faster if they have ambitions beyond simply treading water.

"We're not living in an age where disruption is sequential and iterative where you have an opportunity to learn and prepare for the next event. We're existing in an environment where disruption is happening frequently and can feel quite chaotic, so there isn't an opportunity to do slow thinking about these risks" says Voznaya.

To thrive in such an environment, organisations must change their thinking and learn to lean into the risks they face — not blindly charging into the chaos, but rather taking smart, calculated decisions that balance risk with opportunity.

"An antifragile approach requires a step change in the way that we're thinking about enterprise risk management and business continuity management, so it's a combination of the two," says Voznaya. "This means abandoning the idea that you're solving specific operational failures in isolation and instead taking a holistic approach that combines disruption, mitigation and opportunity."

Some organisations believe they have already adopted this mindset. As many as 49% of business leaders described their organisations as "very" or "somewhat" antifragile. Yet there was a disconnect between this perception and the number describing themselves as risk welcoming (7%) and those who decentralised decision-making (26%), traits that define successful antifragile businesses, such as Nvidia. This suggests that while organisations aspire to be antifragile, putting that mindset into practice might not be quite as straightforward.



“The traditional thinking about risk management is all about reducing your risk profile and that’s how senior managers and boards used to look at risk,” says Brenda Begg Asiodu, Chief Risk Officer at Mott MacDonald. “Risk managers increasingly need to shift the conversation to risk appetite and understanding how much risk the organisation is comfortable with taking. It’s about directing the discussion towards understanding their risk landscape and creating space for exploration and more risk-taking activities. There are just too many disruptions to business both in known and unknown risks — organisations need to learn to compete differently, which means taking more risk. If companies only play it safe, they can’t compete.”

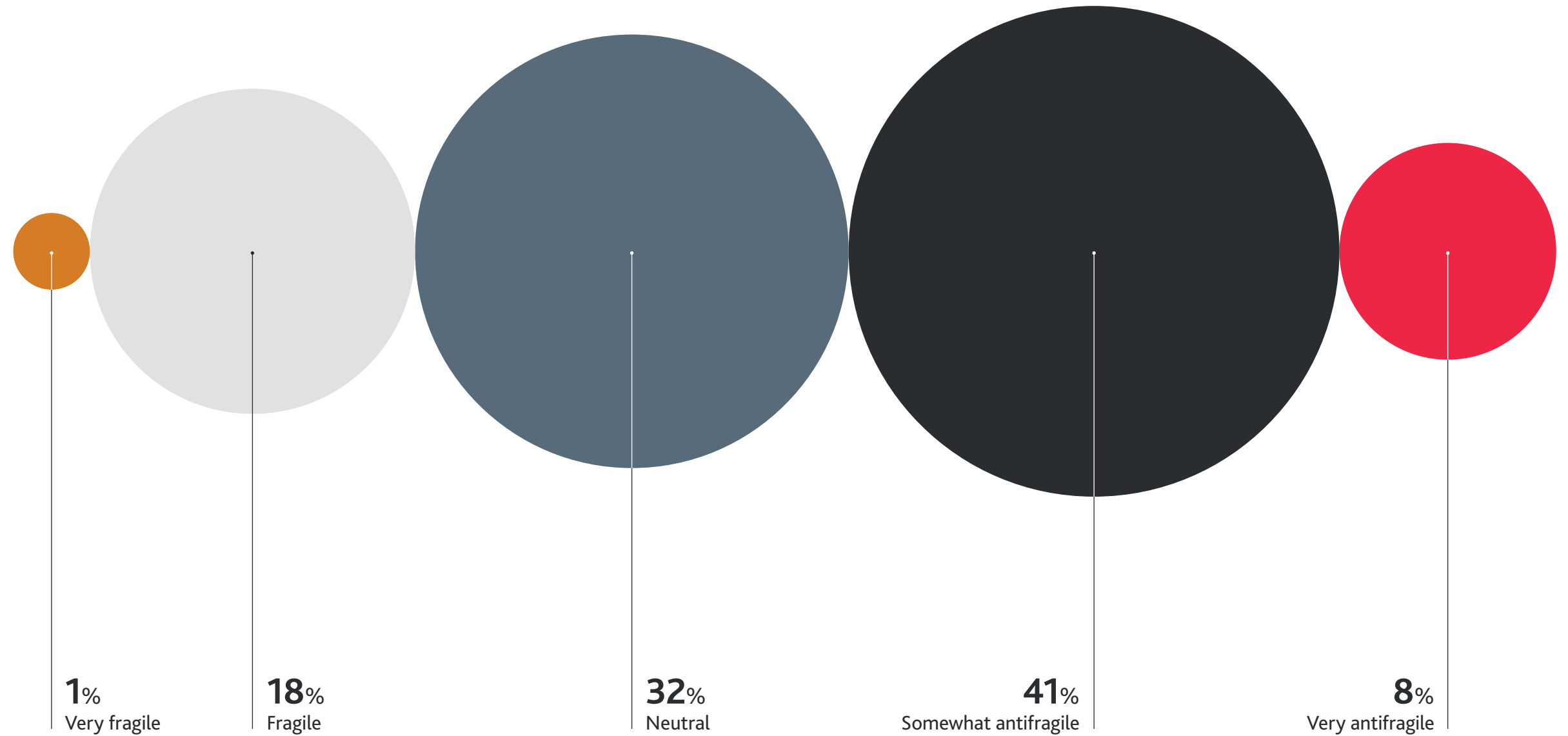
Therefore, with risk velocity showing little signs of slowing, the need for organisations to turn those aspirations into action and transform risk into an opportunity is going to become increasingly critical if they want to not only survive but thrive. This means viewing all risk through an antifragile lens, be it developments in AI, regulatory change or supply chain disruption, topics explored in the rest of this report.

**Key takeaway**

**How to become antifragile**

Risk is not something to be feared. By leaning into risks and finding opportunity in disruption, organisations can evolve quickly from being merely resilient to thriving in times of crisis. This means adopting an entirely new mindset that is both risk welcoming and proactive when dealing with risk (not simply reacting when an event has already occurred).

TO WHAT EXTENT WOULD YOU DESCRIBE YOUR ORGANISATION AS ANTIFRAGILE?



# Corporate trauma

Businesses are feeling the scars from a sustained period of disruption, denting their risk appetite

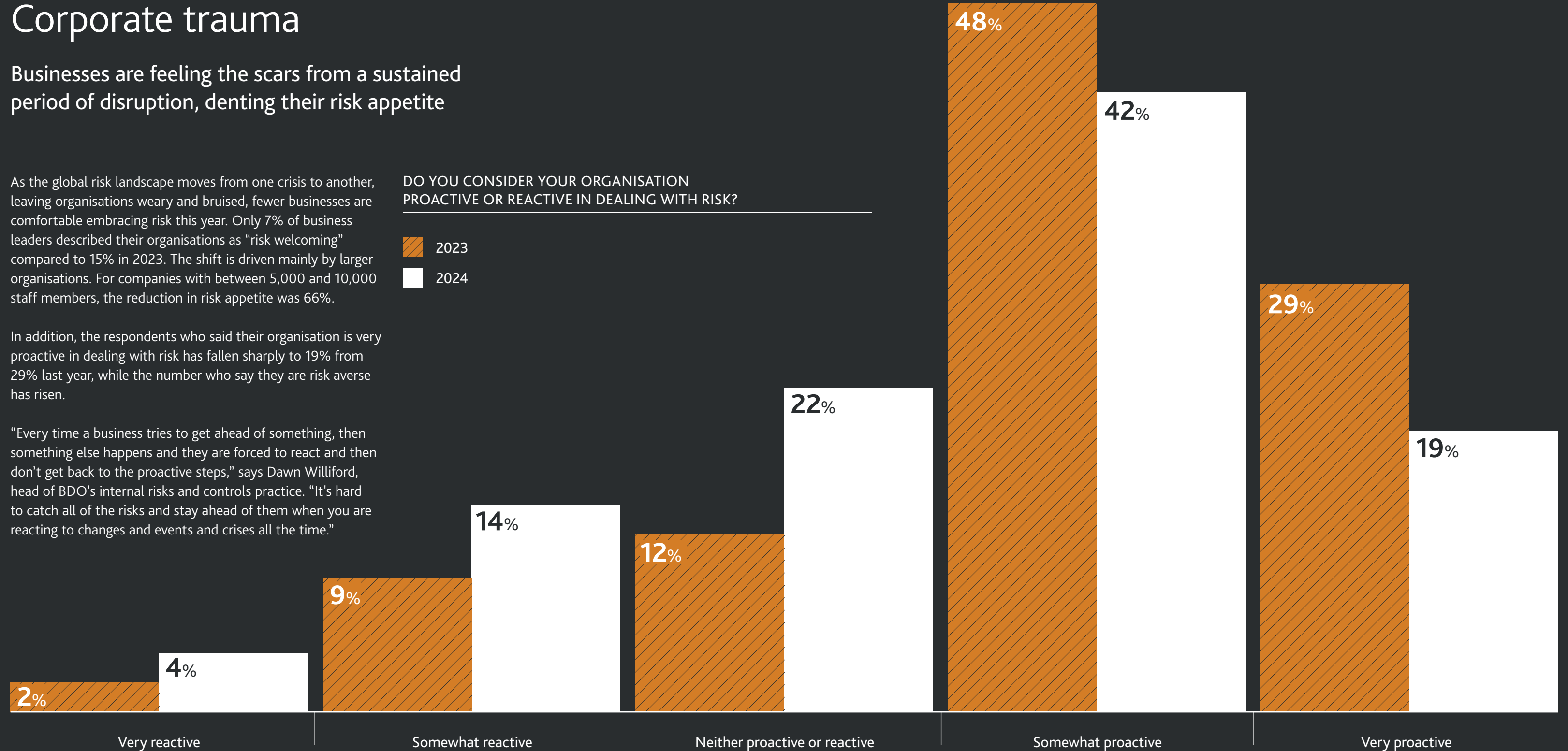
As the global risk landscape moves from one crisis to another, leaving organisations weary and bruised, fewer businesses are comfortable embracing risk this year. Only 7% of business leaders described their organisations as “risk welcoming” compared to 15% in 2023. The shift is driven mainly by larger organisations. For companies with between 5,000 and 10,000 staff members, the reduction in risk appetite was 66%.

In addition, the respondents who said their organisation is very proactive in dealing with risk has fallen sharply to 19% from 29% last year, while the number who say they are risk averse has risen.

“Every time a business tries to get ahead of something, then something else happens and they are forced to react and then don’t get back to the proactive steps,” says Dawn Williford, head of BDO’s internal risks and controls practice. “It’s hard to catch all of the risks and stay ahead of them when you are reacting to changes and events and crises all the time.”

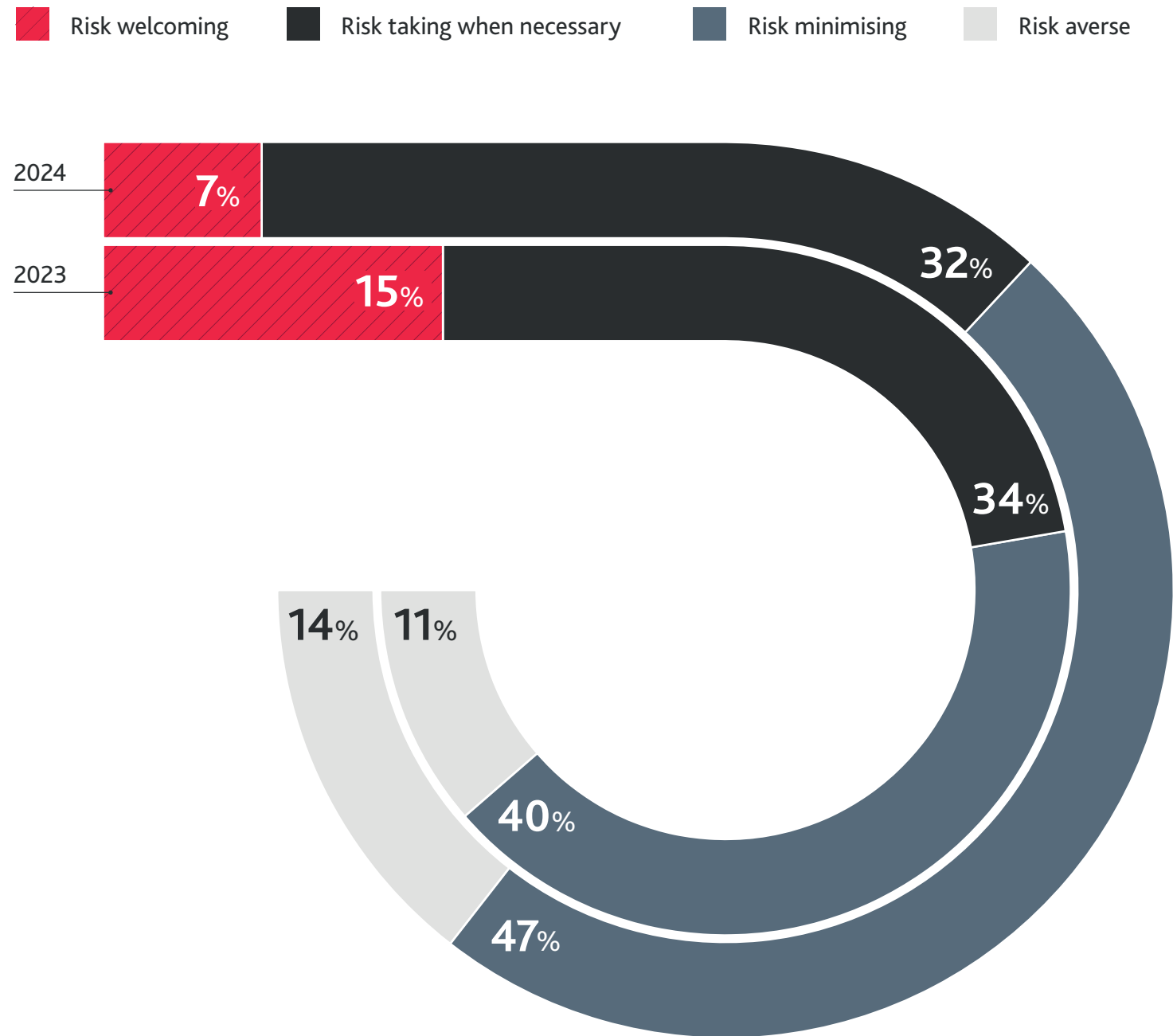
DO YOU CONSIDER YOUR ORGANISATION PROACTIVE OR REACTIVE IN DEALING WITH RISK?

- 2023
- 2024





RISK APPETITE IS DECREASING



Some of that might be down to organisations that miscalculated their risk-taking efforts during the pandemic, such as investing in too much inventory on the assumption that lockdowns would create a permanent shift in consumer habits. Other organisations, particularly in the tech sector, aggressively expanded headcount only to see demand level off in the aftermath of the pandemic, prompting a wave of mass redundancies.

“Companies are struggling to come out of survival mode into thriving mode,” says Alisa Voznaya, Director of Risk Transformation, BDO LLP. “There’s a lot of hesitation. The mindset is they want to be thriving and succeeding and growing. But actually they experienced a number of setbacks and events — some of them internal, some of them exogenous — and that’s been really painful.”

“Those experiences have left a sour taste, causing many to pause and take stock before making any significant

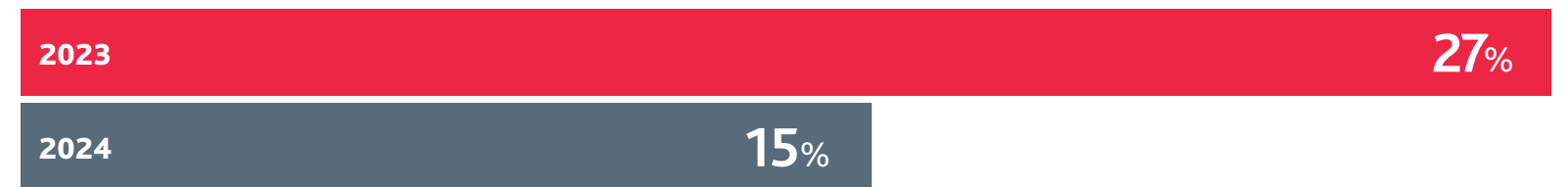


**It's hard to catch all of the risks and stay ahead of them when you are reacting to changes and events and crises all the time**

risk decisions,” she says. This reserved approach means those organisations are potentially missing out on growth opportunities that might become apparent with an antifragile attitude to risk. By adopting this way of thinking, businesses can start to take a proactive approach to risk and seek out competitive advantage rather than taking a reactive and defensive stance.

LARGER ORGANISATIONS ARE DRIVING THE PULLBACK FROM RISK

How many organisations with 10,000+ employees are risk-welcoming?



## Why has AI optimism faltered?

Organisations are taking a more cautious view on AI following a year of relentless hype. But is this the right approach?

When OpenAI's ChatGPT large language model landed to breathless plaudits in late 2022, organisations scrambled to figure out how generative AI (GenAI) might transform not only their businesses but entire industries. Commentary invariably centred around one common theme — those who didn't move fast enough would inevitably be left behind.

One year on, while optimism is still high, the temperature has cooled. The survey showed that the percentage of business leaders who see the evolution of AI technology

as an opportunity for their organisations dropped to 59% from 83% in 2023, a fall of 29%. Much of this is likely due to organisations trying to untangle the PR hype from the reality and what it really means for their businesses.

"At first, everybody thought there was tons of opportunity with AI, but then people started getting into it and realised it's not as easy to implement because it's very overwhelming — there's just so much to do and so much to figure out," says Kirstie Tiernan, Data Analytics Practice Leader, BDO US.

Some organisations shelved their immediate AI plans once they began exploring its potential because they discovered they were not capable of using it: for instance, they didn't have access to the right data. Some are also concerned they might not have the necessary skills within the business to use the tools effectively.

"Many C-suites don't yet have the level of knowledge or confidence in decision-making when it comes to the use of AI in their businesses," says Teresa Morahan,

PERCENTAGE OF BUSINESS LEADERS THAT SEE THE EVOLUTION OF AI TECHNOLOGY AS AN OPPORTUNITY

2023

2024

83%

59%

WHERE DO LEADERS THINK AI TOOLS WILL HAVE THE BIGGEST IMPACT IN THE NEXT YEAR?

**21%**  
Predictive analytics for financial risks

**16%**  
Capability and skill augmentation

**13%**  
Supply chain

**13%**  
Fraud detection and prevention

**12%**  
Cybersecurity

**8%**  
Demand forecasting and data predictions

**7%**  
People management

**5%**  
Risk identification and assessment

**5%**  
Compliance monitoring



Partner and Head of Global Technology, Media and Telecommunications, BDO Ireland. “There’s definitely a further education process required so that C-suites have more surety about its reliability, how it’s used and the efficiencies it potentially brings.”

Another challenge is that unless there is a designated leader overseeing an organisation’s AI programme, discussions between IT and business teams can often lack direction and projects struggle to get off the ground.

“This means you just get stuck in a leadership void and so nothing goes anywhere because organisations are missing a catalyst in the middle around how to push AI forward,” says Tiernan. “So organisations need to make sure they have somebody who really owns AI and is responsible for implementing and leading and can push it forward to connect business and IT in a strategic way.”

**59%**



**now see AI as an opportunity for their organisation**

Given those challenges, only a third of organisations say they are using AI for risk management. However, that number is likely to change as the technology develops and risk professionals see the benefits it can bring to decision-making and risk assessments, says Morahan. Just 5% of respondents said they are currently using AI for risk identification and assessment.

Concerns about trust are a stumbling block given that GenAI is a 'black box' technology which evolves over time and is difficult to validate. The data used to train the AI models is also a key consideration as it may skew the accuracy of any content that is generated.

“What goes into the algorithms and the biases that get introduced to risk management systems is absolutely critical,” says Alisa Voznaya, Director of Risk Transformation, BDO LLP. “If you just start inputting disparate thoughts around risk management into generative AI, you’re going to get garbage outputs that masquerade as comprehensive, and those outputs are going to drive you in the wrong direction and limit the effectiveness of your decision-making.”

Given those uncertainties and other unknown perils, risk managers are likely to be 'fast followers' when it comes to adopting AI, rather than leading from the front. This caution is also likely to temper the pace at which the rest of their

“

**Organisations need to make sure they have somebody who really owns AI and is responsible for implementing and leading**

organisation adopts AI. For starters, regulatory risk such as data privacy rules could be a potential issue. Relying on inaccurate AI-generated information could also be damaging for an organisation’s reputation, says Morahan.

Against this backdrop, taking an antifragile approach to AI adoption can help businesses better balance the need to safeguard their organisations while identifying the potential opportunities and first-mover advantages created by integrating these tools ahead of their competition.

“AI is a prime example of a business disruptor, and companies will need to both explore where value and growth can be achieved, whilst being confident that they are not placing their organisation, employees or clients at risk,” says Darren Mead, Director of Risk at Progeny.

**Key takeaway**  
**How to overcome AI barriers and capture the benefits**

Steps to capture the transformative benefits of AI include: Placing a senior executive in charge of leading and overseeing AI adoption. Educating the C-suite to ensure senior leaders are comfortable with the risks and opportunities of AI. Developing AI guidelines that encourage innovation while reducing risk and creating a framework to support different areas of the business in exploring AI. Ultimately, taking an antifragile approach to AI that mitigates risk while identifying areas for competitive advantage will be the best approach to balancing risk and opportunity.

# AI for risk management: in search of the promised land

## Can AI change perceptions of risk management and transform risk into a profit centre?

Despite the waning optimism in this year's survey, there is huge potential for AI to transform risk management. While only a third of respondents said they are using AI in their risk function, 88% of those who aren't yet using it said they are considering adopting it in the future.

Some risk managers hope that AI can help shift risk management from a cost centre to a profit driver. "If organisations get the investment right, risk will be seen less as a cost and more as an opportunity," says Tiernan. "It shifts the whole dynamic where risk management is seen as something that can help the organisation drive revenue."



**1/3**  
of business leaders say their organisations are using AI tools for risk management

"In risk management we've been talking about the balance between mitigation and opportunity for a long time, but the concept of opportunity within risk management is a tough one to sell because most people haven't experienced that," says Voznaya.

Business leaders' default reaction is usually to focus on the challenges posed by risks rather than the opportunities they present, says Voznaya. This is understandable, but insufficient in the current landscape. Organisations need to consider the opportunities surfaced by risks as a first order priority when engaging in risk management.

AI can help solve this, she notes, by cutting down the time it takes between theory and application by rapidly spotting opportunities and then being able to focus on pursuing them.

It might also help identify new risks by picking out patterns in the data that wouldn't be possible with current risk models. "This doesn't mean an organisation



would necessarily become more risk averse if it is finding new risks; sometimes it can actually be more comforting because organisations now know what the risks are and have the right mitigation strategies in place," says Morahan.

Another way AI can stop risk management from being seen as a cost centre is by handling lower value tasks that

have traditionally been a drain on resources. For instance, it can help streamline workflows, eliminate manual tasks and also act on unstructured data that conventional systems struggle to process.

"Where AI can really help risk managers is reducing the drudgery of the inputs into risk management frameworks and ensuring the quality of the output is enhanced," says Sheraz Afzal, Chief Legal, Risk and Compliance Director at Quint Group. "It's still the very early stages of what AI can do but I think it will transform risk management and definitely decrease the drudge of admin work."

This can help free up risk managers to focus on higher value tasks, as well as encourage organisations to think differently about risk management and recognise it as a potential profit centre.

"AI is definitely the first thing that's been able to take us to another level in a long time," says Tiernan. "You're creating capacity for humans to think more. There's just so much more that can be done with that."

# Shifting sands: evolving risk priorities

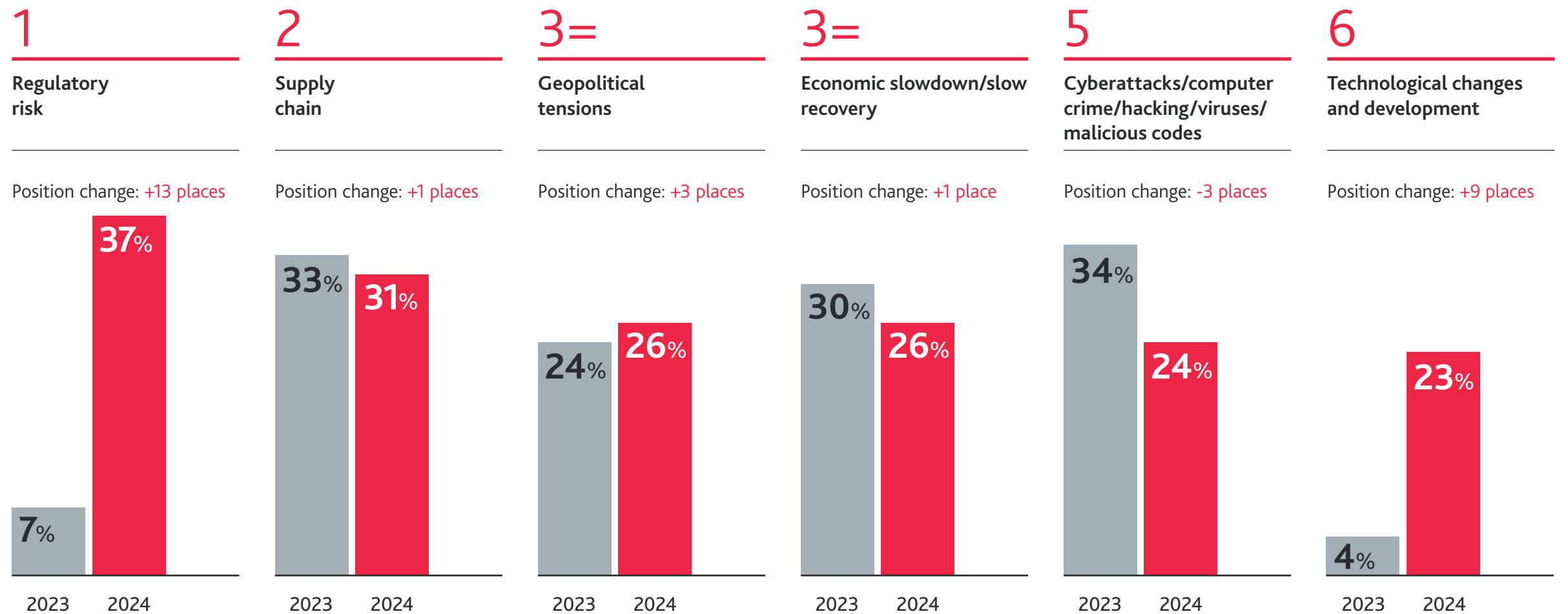
Business leaders say they are unprepared for a whole slate of new perils this year as the risk landscape continues to change

With risk velocity accelerating, the types of risks that businesses feel unprepared for have shifted significantly over the past 12 months. Compliance concerns have shot up risk registers, with 37% of business leaders citing regulation as a top three risk their organisations are most unprepared for, compared to just 7% in 2023. This is likely because some of the biggest risks that businesses face — such as advances in AI, digitisation and ESG — all have a regulatory component, with potentially onerous financial penalties for noncompliance.

Technological changes and development have also rocketed up organisations' risk registers. Just 4% of respondents cited tech as a concern last year, compared to 23% in this year's survey, making it the sixth-biggest risk. CEOs are most concerned about the pace of technological change, with 48% of corporate leaders citing it as a top risk their organisation is unprepared for.

Supply chain risk moved up one place to become the second-biggest risk business leaders say they are most unprepared for, despite the heightened focus on supply chain fragility that was exposed during the COVID-19 pandemic. Ship attacks in the Gulf of Aden impacting vessels travelling to Europe from Asia via the Suez Canal, prompting marine traffic to be diverted around the west coast of Africa, have underscored how global supply chains can be disrupted by a single choke point.

WHICH RISK IS YOUR ORGANISATION MOST UNPREPARED FOR?



BIGGEST SHIFTS IN C-SUITES' CONCERNS



**48%** of CEOs named technology risk as a top risk their organisation was unprepared for

Geopolitical tensions remain a persistent challenge, edging up three places to become the joint third-biggest risk business leaders said they are unprepared for. Russia's war on Ukraine, the conflict in the Middle East, and China's tensions over Taiwan are all having a destabilising effect. For companies that expanded during a period of relative calm, the stresses on the global order are alarming, says Alisa Voznaya, Director of Risk Transformation, BDO LLP.

"That's the reason why corporates are very on edge around this and trying to figure out what does this all mean for us," she says.

While some risks have become more prominent, others have eased. Cyber risk, for instance, has fallen, partly because businesses have already invested heavily in their cyber defences and feel more prepared, even if cyberattacks continue to increase. Environmental risk saw the biggest drop off from 38% to 15%. It seems unlikely that organisations think climate change has been solved, but other risks are seen as more immediate threats.

# Antifragility in practice: lessons from Nvidia

## Nvidia's antifragile mindset has helped it survive three near-death experiences — and emerge stronger every time

When Nvidia was founded in 1993, it started out making graphics chips for PC gaming. Fast-forward three decades and the California-based company is the leading chipmaker powering the AI revolution.

According to TechInsights, the market for data-centre AI chips in 2023 was \$17.7bn — and Nvidia had a 65% market share.

The journey hasn't been without drama. Nvidia has overcome multiple crises over the past three decades, supported by an antifragile mindset that has enabled it to seize opportunities in the face of adversity and help the company grow and thrive.

### Crisis one

Back in 1997 — before Nvidia had even turned five — the business was heading for bankruptcy. The market for computer graphics cards had become commoditised and Nvidia's chip was not compatible with Microsoft's software, effectively shutting it out of the market and putting the company's survival at risk.

Speaking to business strategy podcast Acquired, Nvidia co-founder and CEO Jensen Huang said: "That time — 1997 — was probably Nvidia's best moment. The reason for that was our backs were up against the wall. We were running out of time, we were running out of money, and for a lot of employees, running out of hope."

To survive, Huang and his co-founders decided they needed to bet the company on building the fastest and biggest chip on the market, and at a much higher price point than any of its competitors. The bet, which Huang described as a 50/50 punt, paid off: the Riva 128 graphics card sold a million units in just four months, helping Nvidia entirely dominate the gaming market and underscoring the importance of embracing risk and seeking opportunities in times of crisis.

### Crisis two

Nvidia went public in 1999 following the creation of its next graphics card, which it called a graphics-processing unit, or GPU. Its stock price performed well, reaching a high of

approaching \$10 a share in 2007. But Huang — coloured by the do-or-die experience in 1997 — was looking for what he calls the next 'zero-billion-dollar-market' — a market with no competitors or even customers today but with huge potential in the future.

With this goal in mind, he started working on a supercomputing software platform called CUDA, which deploys the immense but specialised processing power of graphics cards for other applications — something for which there was little demand outside of scientific researchers.

But the financial crisis was also brewing. With Huang distracted by CUDA, the focus on Nvidia's core chip business — the gaming market — waned. By 2008, with earnings weaker and the financial crisis in full swing, Nvidia went from around \$6 a share to less than \$2.

With their backs against the wall again, Nvidia doubled down on the CUDA bet — one that would pay off handsomely.



# 65%

**Nvidia's share of the data centre AI chip market**

Source: TechInsights



Because the CUDA platform only runs on Nvidia chips, the company had created a closed ecosystem that would reap rewards as the AI revolution took hold (more on that below).

**Crisis three**

Nvidia's stock price languished in the immediate wake of the financial crisis, hovering around \$5 a share. But as the 2010s advanced, the growing popularity of Bitcoin increased demand for Nvidia chips among crypto miners, helping its share price surge.

By August 2018 it was trading at around \$68 a share. Yet when the price of Bitcoin collapsed the following month, crypto mining demand cratered and Nvidia's stock took another pummelling, dropping to around \$33 by December of that year.

Huang, now fully accustomed to bouncing back from adversity, had already eyed another opportunity for diversification. Widespread digitisation meant businesses were generating vast amounts of data, increasing the need for data centres where that data could be stored — something Nvidia's chips would help power. That bet also paid off. Its data centre business generated \$17bn of revenue in the fourth quarter of 2023, a 409% increase on the same period in 2022.

That increase was also being driven by another opportunity that Huang had spotted a decade earlier — the emergence of AI. AI researchers had been using Nvidia's CUDA platform to develop neural networks, increasing demand for Nvidia's GPU chips among the AI community.

Huang decided to concentrate on making AI-focused GPUs. When the hype around AI reached fever pitch following the release of OpenAI's ChatGPT tech in late 2022, Nvidia was ready to take advantage. By mid-May 2024, one Nvidia share was worth almost \$950, making it the world's third-largest company by market capitalisation.

**Antifragile mindset**

Nvidia's resilience has three elements.

**Innovation and experimentation:** Even under extreme pressure, Nvidia didn't stand still: it horizon-scanned and hunted for bet-the-company opportunities to help the company emerge bigger and stronger. This antifragile mindset — the willingness to embrace risk and learn from past failures — is ingrained in Huang's character. He told the New Yorker magazine that he works best when under adversity. "My heart rate actually goes down," he said.

**Decentralisation:** Nvidia avoids endless layers of managers passing messages to the top. Instead, decisions are made among teams with all levels of seniority in the same room. This enables Nvidia to make decisions faster and rapidly take advantage of opportunities.

**Learning from failure:** Nvidia has weathered more crises than the three defined above; it endured the dot-com bust, failed acquisitions and more. However, the company emerged more potent after each one — the true definition of antifragility.

How many businesses can say the same? In our survey, less than 2% of executives said their organisations had all three attributes. However, the outlook is brighter. For instance, 46% said they want to encourage more innovation in the next two years.



"I find that I think best when I'm under adversity, my heart rate actually goes down"

**Jensen Huang**  
CEO, Nvidia

**7400x**

increase in Nvidia's market value since listing in 1999

Just

**2%**

of business leaders say their firm has the three key attributes of Nvidia



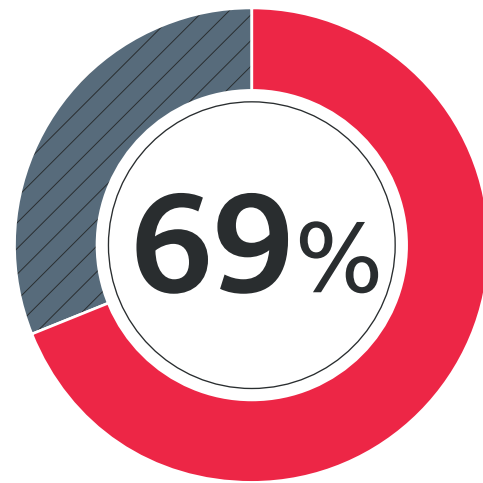
# Masters of chaos: turning supply chain risk into opportunity

## Attacks on ships in the Gulf of Aden have once again thrust global supply chains up the risk hierarchy

Just when organisations thought they were getting a grip on their supply chains in the wake of COVID-19, disruptions to global shipping routes have once again cast a spotlight on supply chain risk. The brittleness of global supply chains has been brought into sharp relief, with Yemen's Houthi rebels targeting ships in the Gulf of Aden, one of the world's busiest shipping lanes.

Meanwhile, drought in the Panama Canal has reduced the number of vessels that can cross each day. Add in the backdrop of increased global tensions, including Russia's ongoing war on Ukraine and the conflict in the Middle East, and it is little wonder supply chain challenges remain one of the biggest risks organisations say they are unprepared for.

"A ripple can soon become a tsunami," says Fraser Paget, Head of Supply Chain and Logistics Advisory, BDO LLP.



**expect the conflicts in Ukraine and the Middle East to continue for at least the next year**

"Unless we get back to normal, supply chains will always be at the top of those risk registers."

There is little optimism that tensions will subside anytime soon. 74% of respondents said they expect the intensity of global conflict to increase over the coming year, with 69% expecting the conflicts in Ukraine and the Middle East to persist for at least the next 12 months.

Yet while 56% of respondents said they have taken steps to protect their supply chains from Houthi attacks, only 36% say they have an adaptive supply chain in place to manage disruption. This suggests organisations failed to heed the lessons of the pandemic.

"That tells you that those businesses aren't antifragile, because if they'd learned and got stronger through COVID-19, they'd be strong now, so it obviously hasn't struck home," says Paget.

Since the pandemic, a lot of manufacturers have slipped back into just-in-time supply chains, leaving them exposed to delays caused by redirected shipping routes, Paget says. For instance, carmakers including Tesla and Volvo were forced to temporarily shut down production lines in Europe due to a shortage of parts.

While manufacturers reel from delays, at the other end of the scale, many retail businesses are lumbered with too much stock, with many over-purchasing during the pandemic.

"You've got one sector that is completely just-in-time and running out and can't keep production going, and you've got another sector which is bloated and has got too much inventory," says Paget.

ESG concerns are also impacting supply chain risk. For starters, climate change might impact the availability of certain goods, says Brenda Begg Asiodu, Chief Risk Officer at Mott MacDonald. The need to measure carbon emissions across a company's supply chain — so-called Scope 3 emissions — may also be challenging.

To overcome these challenges and improve their supply chain management, organisations need better visibility into their supply lines at every link in the chain. They must also ensure they have alternative networks to fall back on in case of disruption. This needs to be combined with better demand forecasting to ensure inventory levels are optimised.

By taking an antifragile approach to supply chain risk, organisations can make calculated bets to capitalise on opportunities when they arise and ensure they are not left holding too much or too little inventory.

"You need all of those elements from start to finish and have some technical capabilities to model the 'what if?' scenario — this is how my business is exposed and this is what would happen," says Paget.

**74%** expect the intensity of global conflict to increase over the next year



36%

have an adaptive supply chain in place to manage disruption

The challenge with this approach is that antifragile supply chain management is costly and investment is often shunted down the pecking order behind other business priorities. Adopting an antifragile mindset to supply chains also means assessing risks at a micro level rather than taking a uniform approach.

“Risks should be taken on an individual basis,” says Paget. “Every individual element of a supply chain needs to be risk assessed — there shouldn’t be an overall view, it should be variable and flexible.”

Some companies have already mastered this approach. Paget uses the example of a large European manufacturer:

“They are a very nimble organisation with a very tight-knit C-suite. They took a risk at the start of COVID-19 by investing heavily in stock and grew their market share by 40% because they had materials in stock and they could manufacture all the way through while their competitors struggled,” says Paget. “If you get it right, and lean into these risks, the benefits can be huge.”

While only 13% think AI will have its biggest impact in supply chain management in the year ahead, this number should increase as the technology of AI improves. However, Paget warns that end-to-end supply chain management would be limited by available data, which might be patchy depending on where those supply chains pass through.

56% have taken steps to protect their supply chains from Houthi attacks on shipping in the Gulf of Aden



46% say they would be willing to embrace supply chain risks to drive competitive advantage



“To be able to press a button and find out what your risk is will hinge on so many variables,” he says. “We might get there in five years but some jurisdictions are naturally secretive, so you might not have complete visibility into your supply chain. Ultimately you want AI to be able to highlight the risks six months before they’re going to happen so you can put mitigation in place so that those things never happen.”

**Key takeaway**  
**How to take an antifragile approach to supply chain risk**

Managing supply chain risk in an antifragile way means being able to anticipate disruption and proactively take measures that can gain a competitive advantage. For example, by maintaining a 360-degree view of their supply chain, manufacturers can better prepare for risk events, stocking up in advance while their ‘just-in-time’ peers are forced to shut down production lines.

## Frozen in place: regulatory paralysis

Advances in tech and an increased focus on ESG are leading to new regulations around the world, and organisations are struggling to keep up

The pace of regulatory change is relentless. There were 61,228 regulatory alerts issued globally in 2022, according to Thomson Reuters, the third-highest total since 2008. The struggle to remain compliant under this fire hose of rules means regulatory risk is now the number one risk business leaders feel they are unprepared for, with 37% citing it as their top risk, up from 7% in 2023.

The fast-evolving regulatory backdrop is in part driven by rapid technological innovation that leaves regulators in a constant state of catch-up. From tougher data privacy rules around the world to the introduction of antitrust measures such as the EU's Digital Markets Act, organisations are contending with a deluge of new rules at home and abroad. The EU, for instance, has already signalled its intent to hold foreign businesses accountable, launching probes into global tech giants including Apple, Alphabet, and Meta Platforms. Regulators are also turning their attention to AI, which could impact the speed of innovation.

"With newer technologies, especially around AI and the fluidity of the technology and pace of its development, it's leading to a very dispersed and fragmented regulatory environment," says Alisa Voznaya, Director of Risk Transformation, BDO LLP.

# 65%



**of C-suite leaders said 'My company is delaying business decisions until after one or more of this year's major elections'**

**Regulatory risk has jumped from**

# 14th to 1st

**in the ranking of risks business leaders feel most unprepared for**

With regulators in different parts of the world taking divergent approaches, activities permitted in one jurisdiction may be prohibited elsewhere, which makes it challenging for global organisations to align their policies, says Voznaya.

This backdrop means organisations need to worry as much about the regulation as they do the underlying risks. For starters, the cost of noncompliance can be severe. Data privacy rules such as the EU's General Data Protection Regulation (GDPR) have sharp teeth that can significantly dent an organisation's bottom line. Fines for GDPR noncompliance can be up to €20 million or 4% of global turnover, whichever is greater. By the end of March this year, the EU had imposed GDPR fines totalling almost €4.5 billion (about £3.8 billion), according to law firm CMS's GDPR Enforcement Tracker.

"You didn't want to get hacked before but now you don't want to also get on the wrong side of the regulator as you may have to pay a massive fine as a consequence," Voznaya says.

There is also growing apprehension in boardrooms about potential liability faced by individuals for regulatory lapses. For instance, the former Chief Information Officer of UK bank TSB was handed a £116,600 fine for a botched IT migration (later reduced to £81,620 for early settlement).

"In some jurisdictions, rules around corporate governance and control environments are really driving this regulatory navel-gazing among boards about responsibility and personal accountability," says Voznaya.

ESG regulations are also creating anxiety among risk managers, particularly whether organisations can meet their climate-related commitments using their existing practices.

"The reality of actually delivering them is going to be a huge strain for many organisations," says Brenda Begg Asiodu, Chief Risk Officer at Mott MacDonald. "For some companies, it could change the entire footprint of where they operate."

Amid this onslaught of new rules, a pragmatic approach to regulatory compliance is needed on all sides. For some regulations, such as GDPR, it is almost impossible to be fully compliant as an organisation, says Koen Claessens, managing partner at BDO Belgium.

Regulators, too, need to be more pragmatic, particularly as it is often unclear how new regulations will be enforced in practice, sometimes resulting in fines being applied inconsistently.

Adding to this regulatory risk is political uncertainty due to a wave of elections that are scheduled or expected this year, including in the US, the EU, the UK and India. Some 65% of C-suite leaders said their organisations are delaying business decisions until after one or more of these elections.

"The risk is the instability of politics and not knowing if new regulations are coming or not coming," says Claessens. "It's not so much about being compliant with the regulation or the capability of being compliant, but how are regulations going to change after the elections by the new governments."

By taking an antifragile approach to regulatory risk, organisations can seek to find opportunities that new regulations create, while ensuring they remain compliant.

To be sure, not all regulatory risks can be embraced. Heavily regulated businesses, for instance, may be limited in the amount of risk-taking they can pursue if they don't want to attract regulatory scrutiny.

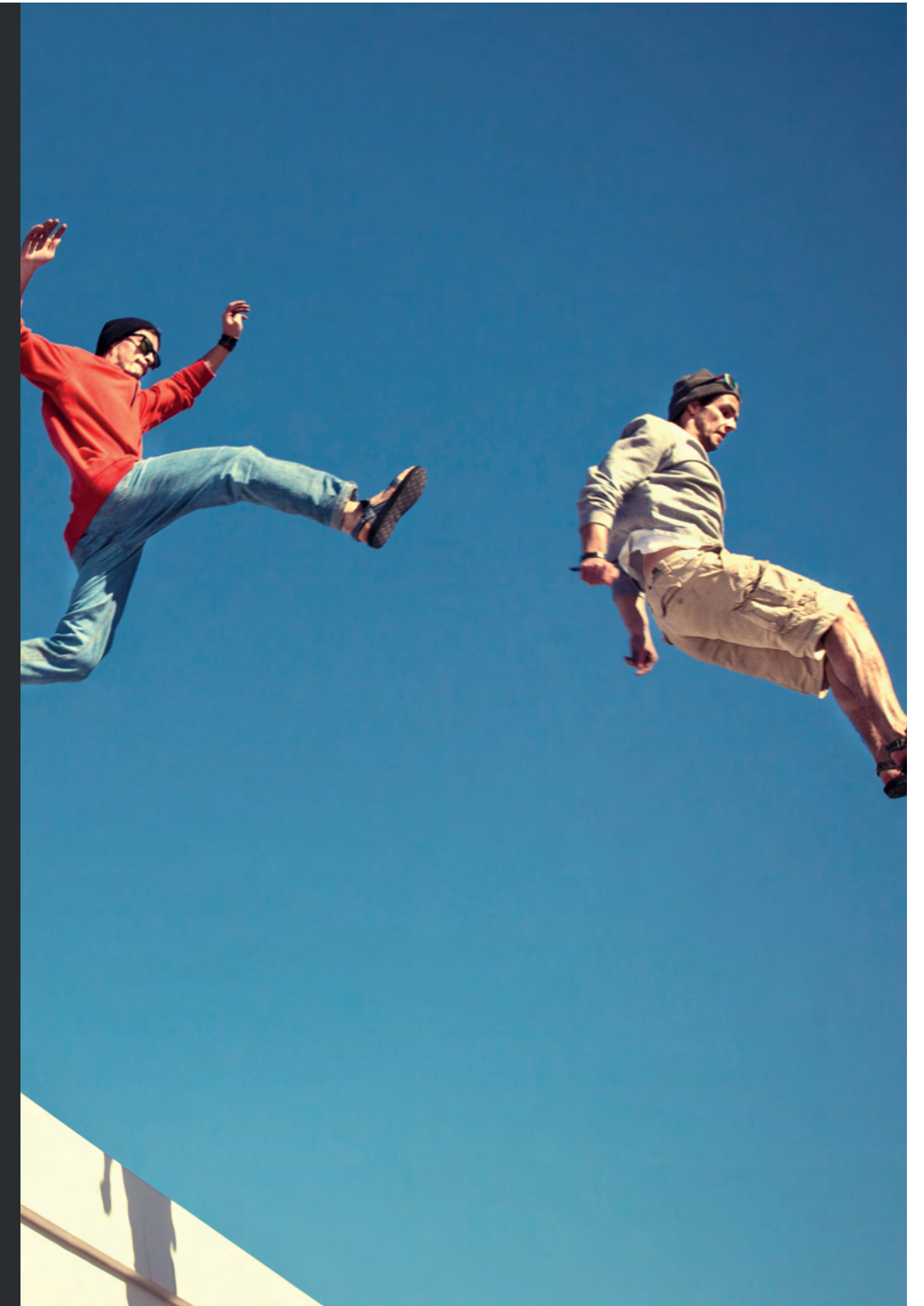
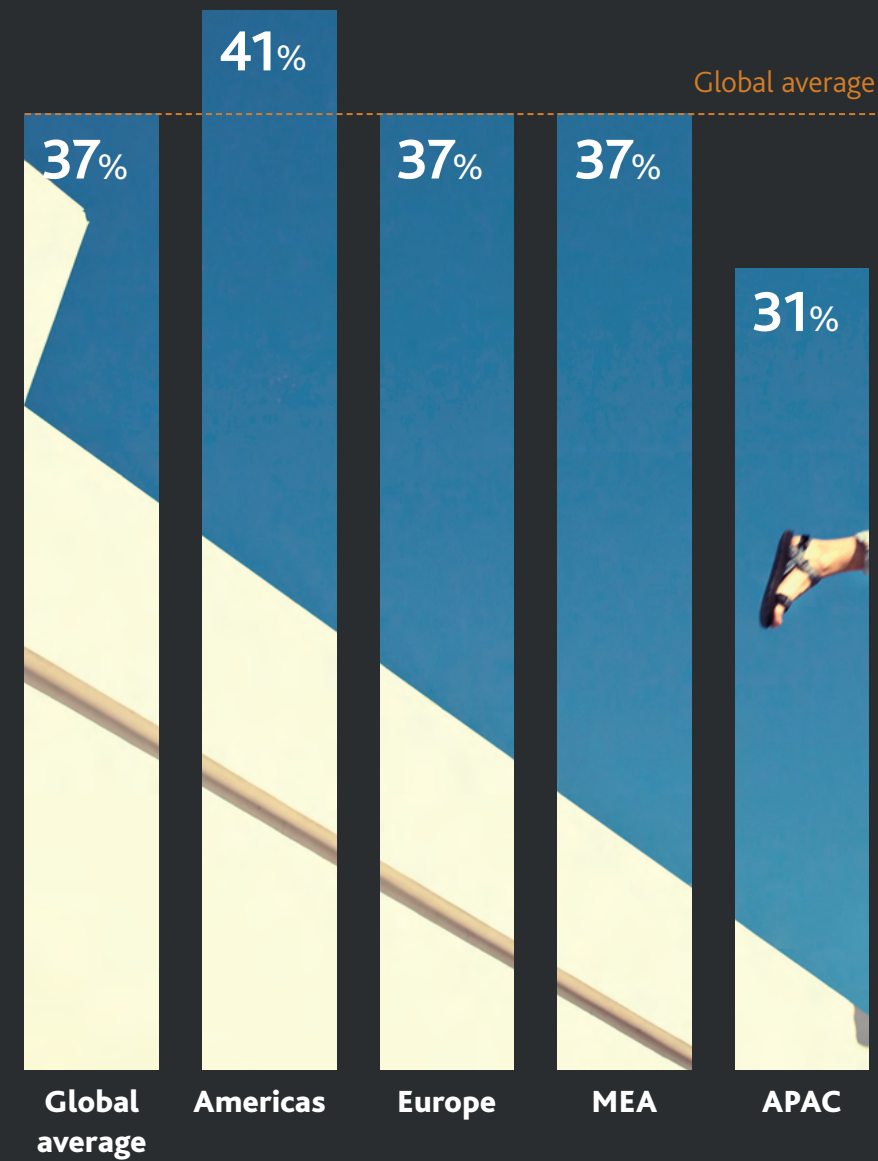
"If you're a financial institution, there are just some risks that you can't take — you can't do anything that would impact your prudential risk," says Sheraz Afzal, Chief Legal, Risk and Compliance Director at Quint Group. "Regulators won't like hearing that you are embracing any kind of risk that could impact your solvency."

However, even for heavily regulated businesses, antifragile approaches can help them better navigate regulatory change and ensure their organisations remain nimble enough to thrive even if compliance obligations increase.

**Key takeaway**  
**How to apply antifragile thinking to regulatory risk**

The pace of regulatory change is creating mounting compliance headaches for organisations, which may take an overly cautious view and pause activities or retreat from certain markets while they weigh the impact of those changes. An antifragile approach instead leans into those regulatory changes, seeking to take advantage of new rules while competitors are still figuring them out.

PERCENTAGE OF ORGANISATIONS UNPREPARED FOR REGULATORY RISKS



## Cyber risk fatigue: embracing uncertainty

### Organisations are growing tired of sinking money into their cyber defences only to continue suffering from breaches

Against a backdrop of rising cybercrime — which cost businesses and consumers \$12.5 billion in the US alone last year, according to the FBI — businesses are starting to get frustrated with cyber risk. Some 44% of respondents said their organisations are suffering from cyber fatigue.

Despite organisations spending significant amounts of cash on bolstering their cyber defences, many still find themselves suffering breaches, either because the threats are evolving faster than the security can keep up or individuals still unsuspectingly click on rogue links.

“The fatigue comes from the fact it is continuous — organisations want to know how much more money they have to put in to plug all the holes,” says Alisa Voznaya, Director of Risk Transformation, BDO LLP. “This is where it’s absolutely critical to have the antifragile mindset because you’re never going to plug all the holes. You can’t just keep throwing money at it. Without this shift, you’ll never protect yourself against every potential eventuality.”

An antifragile approach also means changing the narrative from cyber doom-mongering to one that is more pragmatic and recognises that not all cyber risk is created equal.

“Cyber risk practitioners can do a better job of getting away from the fatigue by being more granular around how we describe what the risk is, offering more comfort and removing fear, uncertainty and doubt around the topic,” says Jason Gottschalk, Partner, BDO Digital.

Yet organisations do at least feel more equipped to tackle it. Cyber risk dropped to fifth place in the risks business leaders feel unprepared for, down from second place in 2023.

“Business leaders are more prepared now because they understand the context, it’s no longer an important boardroom discussion,” says Gottschalk. “It’s like you’re preaching to the choir — it’s accepted. You don’t need to talk to us about it any more.”

For larger organisations, conversations around cyber risk have also matured, with businesses taking a more targeted approach to the threats they face.

“Saying you’re prepared for cyber risk is a bit like saying I want to be good at playing sports,” says Gottschalk. “What sport, specifically, do you want to be good at? Cyber risk is the same. If you want to be cyber resilient, it needs to be more detailed — it has to be a specific threat vector or something sector specific. Generic cyber risk is not fit for purpose any more for large organisations.”

There is also an increased focus on how organisations should respond when they suffer a cyberattack or data leak. For Gottschalk, it is a case of when, not if an organisation will get hacked, meaning it becomes more about preparing for when something goes wrong rather than only focusing on stopping cyber criminals from breaching their systems.

“If you look at where the FS (Financial Services) Act has gone in terms of operational resilience and the new DORA (Digital Operational Resilience Act) regulation that’s coming through, it’s about planning for when the event occurs rather than what to prevent,” he says.

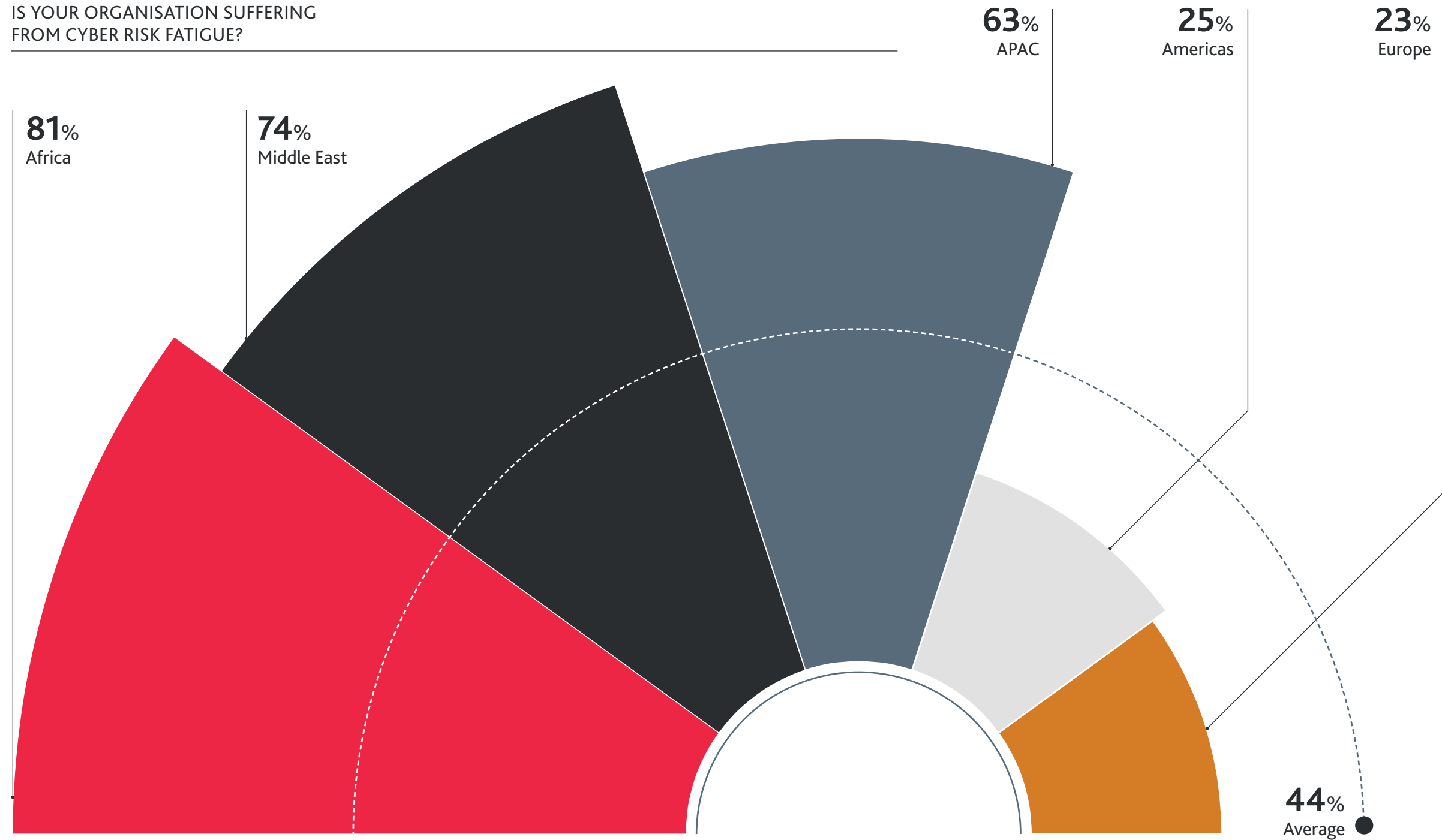
“It’s absolutely critical to have the antifragile mindset because you’re never going to plug all the holes

# 45%



**say the evolution of AI will make securing your organisation against cyber attacks easier**

IS YOUR ORGANISATION SUFFERING FROM CYBER RISK FATIGUE?



This is a notable departure from the traditional preventative approach to cybercrime, which doesn't seem to be slowing criminals down: indeed, there was a 10% increase in reported cyber incidents in the US last year.

With the cyber risk landscape constantly evolving, organisations are already turning to AI to help them detect new risks. However, AI may not be a panacea for cyber risk. Just as organisations can adopt AI tools, so too can the cyber criminals, Gottschalk notes.

"There is definitely value in AI, but attackers are all using AI-enabled tools," he says.

Still, investing in such systems could help reduce the fatigue organisations are currently experiencing from sinking money into cybersecurity defences that quickly become obsolete. ■

**Key takeaway**  
**How to deal with cyber risk in an antifragile way**

No matter how much organisations spend on their cyber defences, cyber criminals can often still find a way in. By taking an antifragile approach to cyber risk management, organisations can respond in a more targeted manner that recognises some risk will always exist while focusing resources on the areas that matter most.

# Conclusion

## Antifragile thinking moves beyond traditional risk management and opens up new strategic options

Risk professionals are dealing with almost constant disruption, with new risks emerging at alarming speed. This is leaving organisations with a sense of resignation that everything is beyond their control. Not only are risk teams squeezed and expected to do more with less, there is no time to pause and learn from disruptive events before the next crisis hits.

However, if they simply sit on the sidelines and wait for the turmoil to pass, organisations would never be able to grow. In this new world of permacrisis, organisations need a new approach to risk that seeks opportunities in disruption. This concept of antifragility — where businesses can thrive in times of crisis — not only rewrites the traditional risk management rulebook, it requires a complete change of mindset. To flourish in this environment and become antifragile, organisations need to get comfortable with and embrace uncertainty. This requires a shift in thinking not only among risk managers but C-suite executives too.

Fortunately, companies are eager to learn; despite multiplying risks, almost half of leaders said encouraging innovation is a priority for their organisation for the next two years.



**Organisations need a new approach to risk that seeks opportunities in disruption and turns risk into a competitive advantage**

But to do this, organisations need to take a step back and challenge entrenched assumptions and beliefs. By really probing ‘why do we do it this way?’, organisations can start to think differently about how they approach risk, opening up new perspectives and ideas that might have been overlooked in the past. When organisations detach themselves from a risk averse culture and embed antifragility into everything they do, they can be more proactive, innovative and agile.

By adopting this mindset, organisations can then start to build a framework that enables them to welcome uncertainty and seek opportunity in times of disruption, turning risk into a competitive advantage. This mindset means that when the next crisis hits, they are ready to spring into action while their competitors retreat, helping antifragile businesses grow and prosper in a world of constant change.



**FOR MORE INFORMATION:**

**TIM FOSTER**

Partner and National Head of  
Risk Advisory Services, BDO LLP

+44 (0)7583 114121

tim.foster@bdo.co.uk

This publication has been carefully prepared, but it has been written in general terms and should be seen as containing broad statements only. This publication should not be used or relied upon to cover specific situations and you should not act, or refrain from acting, upon the information contained in this publication without obtaining specific professional advice. Please contact BDO LLP to discuss these matters in the context of your particular circumstances. BDO LLP, its partners, employees and agents do not accept or assume any responsibility or duty of care in respect of any use of or reliance on this publication, and will deny any liability for any loss arising from any action taken or not taken or decision made by anyone in reliance on this publication or any part of it. Any use of this publication or reliance on it for any purpose or in any context is therefore at your own risk, without any right of recourse against BDO LLP or any of its partners, employees or agents.

BDO LLP, a UK limited liability partnership registered in England and Wales under number OC305127, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms. A list of members' names is open to inspection at our registered office, 55 Baker Street, London W1U 7EU. BDO LLP is authorised and regulated by the Financial Conduct Authority to conduct investment business.

BDO is the brand name of the BDO network and for each of the BDO member firms.

BDO Northern Ireland, a partnership formed in and under the laws of Northern Ireland, is licensed to operate within the international BDO network of independent member firms.

Copyright © June 2024 BDO LLP. All rights reserved. Published in the UK.

[www.bdo.co.uk](http://www.bdo.co.uk)

