



GLOBAL TECHNOLOGY INDUSTRY RISK STUDY

MARCH 2021

Ubiquitous Technology, Accelerating Risks



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FOREWORD

In many ways, “essential” has come to define the pandemic world. Essential jobs. Essential connections. Essential services. From health care workers and first responders to delivery drivers and grocery clerks, the world learned to appreciate the people and services that keep society functioning.

In the 12 months since the pandemic began, technology has been “essential” to enabling global responses and recovery. Video conferencing has allowed business to continue functioning — and people to maintain familial and personal connections. Bandwidth and wireless technology has supported employees working from home and enabled students to attend classes from the kitchen table. And people have embraced streaming new movie releases, receiving treatment via telehealth appointments, and ordering food delivery instead of going out on date night.

Even before 2020, the economy was quickly moving toward a digital transformation. Technology now enables and drives nearly every aspect of business and society, driving strong revenue growth for the industry. But it has also created complex risks, many of which have been further complicated by the pandemic.

Marsh’s 2021 *Global Technology Industry Risk Study* explores how technology’s ubiquity is accelerating risks for the industry and end users. When technology fails today, it’s not just an inconvenience; it can be a devastating loss to

individuals, businesses, and society. An outage means a child misses school, a restaurant can’t take orders, a call center can’t serve customers, or a hospital may not be able to coordinate or deliver care.

All of this is occurring amid the most challenging insurance market in decades. Faced with rising insurance costs, technology companies are being challenged to balance risk management needs and stay within budget.

This year, Marsh surveyed more than 170 communications, media, technology, and emerging industry risk professionals and executives globally on these and other matters. We thank all who participated in this year’s survey.

If you have any comments or questions about the results or our interpretations, please do not hesitate to contact me or your Marsh representative. You can also tweet us @MarshGlobal using the hashtag #MarshTechRisk.



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Opportunities and Risks Amid Pandemic

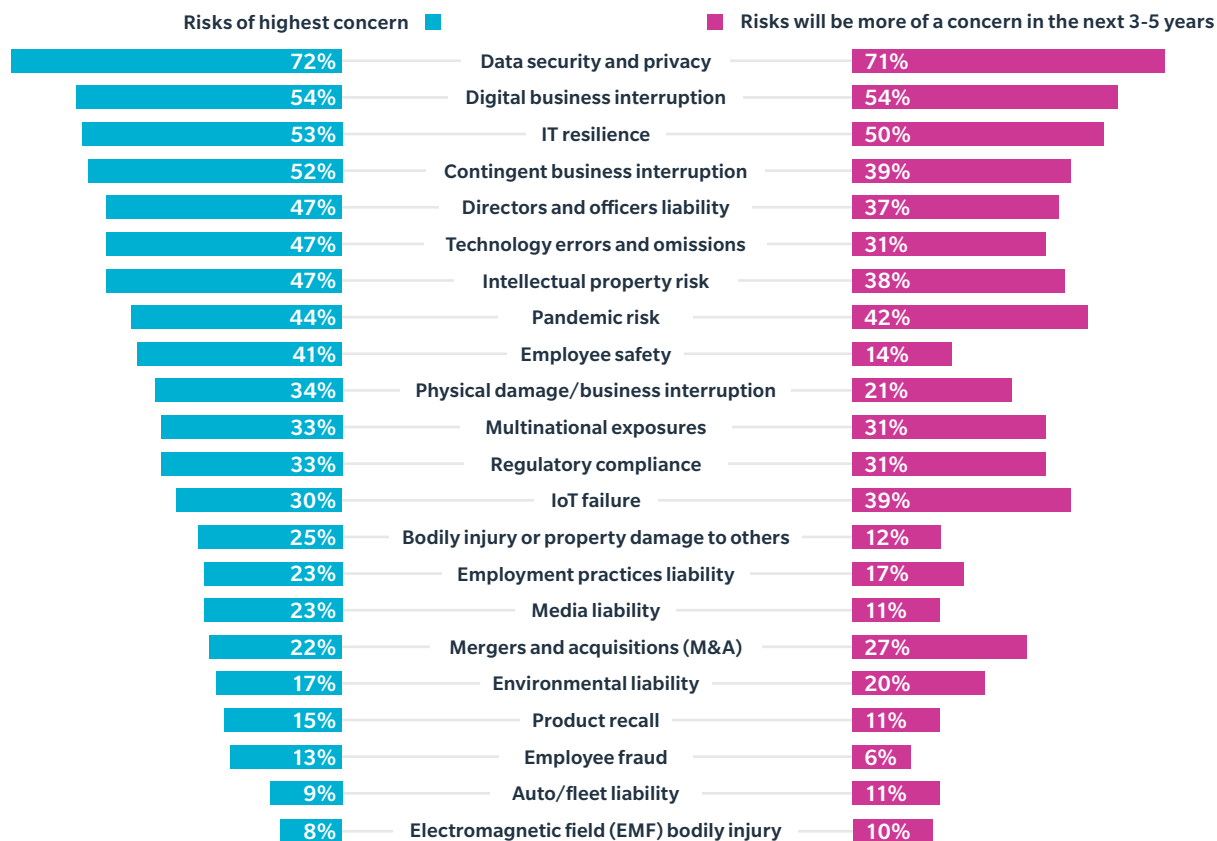
The COVID-19 pandemic has created a massive health crisis, devastated many parts of the economy, and created global turmoil and uncertainty. Technology companies, however, have been resilient. And as demands for a variety of technological solutions have increased amid the pandemic, many companies have benefited from new opportunities and the expansion of existing ones.

Despite the global disruptions it has caused, technology industry companies do not view the pandemic as their greatest business risk. Fewer than half of all respondents to Marsh's 2021 *Global Technology Industry Risk Study* identified pandemic risk as one of highest concern (see Figure 1). While pandemic risk was eighth on technology companies' list of risks of highest concern, 72% of respondents consider data security and privacy their most pressing risk, topping the list in our study for the sixth consecutive year.

FIGURE 1

Digital security and resilience risks remain top concerns for technology companies.

SOURCE: MARSH 2021 GLOBAL TECHNOLOGY INDUSTRY RISK STUDY



By and large, the most pressing risks for technology companies are those that they believe threaten their ability to keep systems up and running and secure. Digital business interruption and IT resilience, for example, rounded out the top three risks for the industry. And respondents don't see these risks getting any easier in the future, with roughly equal shares anticipating that the top three risks will grow more significant over the next three to five years.

Top 5 Risks For Technology Companies in 2021



Data security and privacy: Company or customer data is compromised, stolen, or misused.



Digital business interruption: Business operations are disrupted by a failure of systems or technology without a physical cause. This could be due to a cyberattack, software or design error, or other technology issue not due to a weather, accidental, or other physical cause.



IT resilience: The ability of systems to remain up, functional, and performing at highest speeds and capabilities.



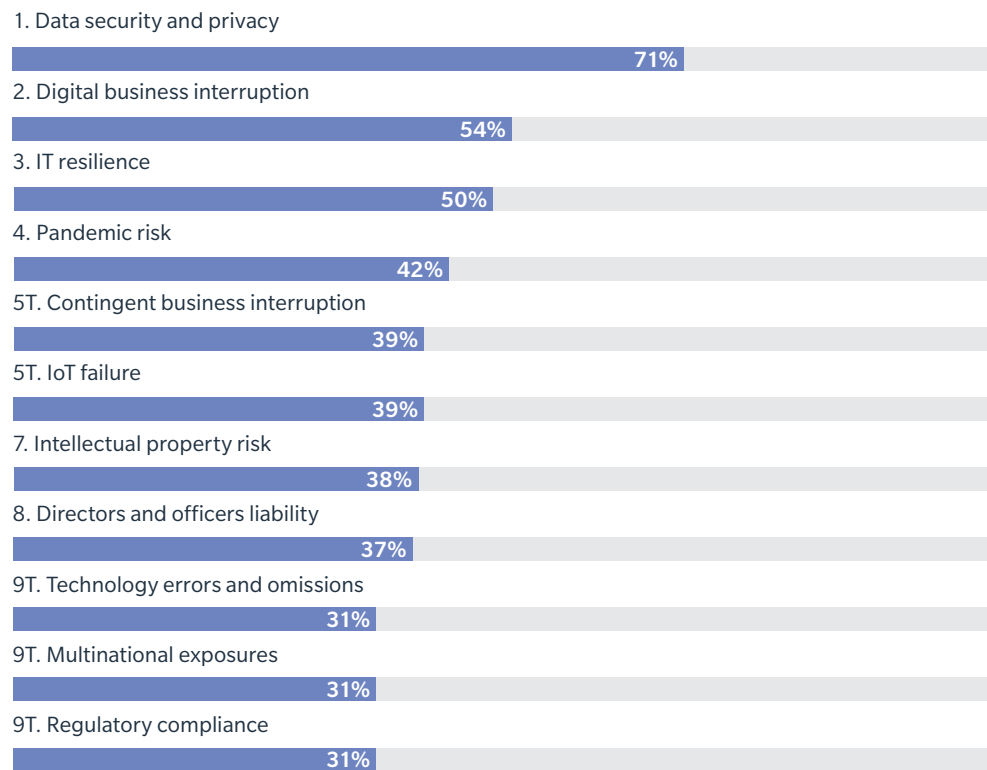
Contingent business interruption: Business operations are disrupted by a failure of a supplier or vendor.



Directors and officers liability: The risk to directors and officers that decisions they make in managing a company are alleged to be wrongful.

Still, technology companies are monitoring pandemic risk, which 42% of respondents expect will grow in the next three to five years. Beyond the health implications, COVID-19's effects on global supply chains — both physical and digital — may also spark technology companies to address related exposures ahead of a future pandemic or epidemic. Such exposures include contingent business interruption risks, which jumped from 10th on the 2020 list of the industry's top risks to fourth in 2021.

Risks Most Expected to Grow in Complexity



Despite Challenges, Tech Sector Remains Resilient

While technology companies certainly felt some effects of the pandemic on revenues and operations in 2020, respondents said that, in most cases, those effects were minor. Only one in five respondents said the pandemic has had a significant adverse effect on revenue or represented an existential threat to their business (see Figure 2). And while some companies saw hiccups during the transition to new

FIGURE
2

COVID-19 has not had a major financial impact on most tech companies.

SOURCE: MARSH 2021 GLOBAL TECHNOLOGY INDUSTRY RISK STUDY

What was COVID-19's impact on your revenue?

Existential threat to our business.

4%

Significant and nearly immediate reduction in revenues.

16%

Near-term decrease in revenues or slowing in growth.

33%

Revenues and growth mostly unaffected.

23%

No immediate positive impact, but reconfirms or accelerates longer-term opportunities.

13%

Nearly immediate positive impact on revenues and growth.

11%

FIGURE
3

Most technology companies smoothly transitioned to new work environments required by the pandemic.

SOURCE: MARSH 2021 GLOBAL TECHNOLOGY INDUSTRY RISK STUDY

What was COVID-19's impact on your company's operating environment?

Beyond expectation, and possibly even better than before.

2%

Minimal impact, overall impressive and seamless.

52%

Some glitches or challenging areas, but operations are generally running well.

40%

Company struggling significantly to adjust to remote work.

6%

remote or socially distant work structures, 94% of respondents said their companies were not facing significant hurdles (see Figure 3).

For some technology companies, the pandemic has not meaningfully hampered operations and, in fact, has had a positive effect on revenue. One reason why tech companies have fared well during the pandemic is their business models. The technology industry's major drivers of growth are intellectual property and intangible assets — neither of which have suffered over the last 12 months.

NO PANDEMIC SLOWDOWN

Although growth for companies in some other industries will largely depend on the speed and degree to which we return to “normalcy,” that is not true for the tech sector. Overwhelmingly, the pandemic has not had a meaningful effect on the factors that will drive growth in the industry in 2021 and beyond.



Top 5 Assets or Capabilities Driving Expected Growth



Skilled and engaged workforce



Engaged and committed customer base



Data, analytics, and insights



Core enterprise/digital platforms



Data centers or communication infrastructure



How Are Tech Companies Planning to Grow in 2021?



Developing new products and services within existing structure



Selling existing products or services to be used in new ways



Creating new divisions (for example, labs and innovation centers)



Launching new partnerships



Mergers or acquisitions

Key Risks Exacerbated

Despite their overall resilience to the effects of COVID-19, a number of critical risks for technology companies have grown more significant amid the pandemic. The pandemic is first and foremost a health crisis, and has thus heightened companies' focus on the health and safety of employees (see Figure 4). Concerns about the stability of digital supply chains and networks have also risen.



Management liability risks, meanwhile, are in the spotlight. One-fifth also say their directors and officers liability risk has risen, likely a reflection of deteriorating conditions in the insurance marketplace, at a time when fewer than half of tech companies view their D&O coverage as adequate — a substantial drop from 2020 (see Figure 5). And as employees, state regulators, activists, and others seek greater diversity within corporate ranks, one-quarter of tech sector respondents to our survey say their employment practices liability (EPL) risk has grown.

FIGURE
5

Tech companies' satisfaction with nearly every form of insurance has fallen in the last year.

SOURCE: MARSH 2021 GLOBAL TECHNOLOGY INDUSTRY RISK STUDY

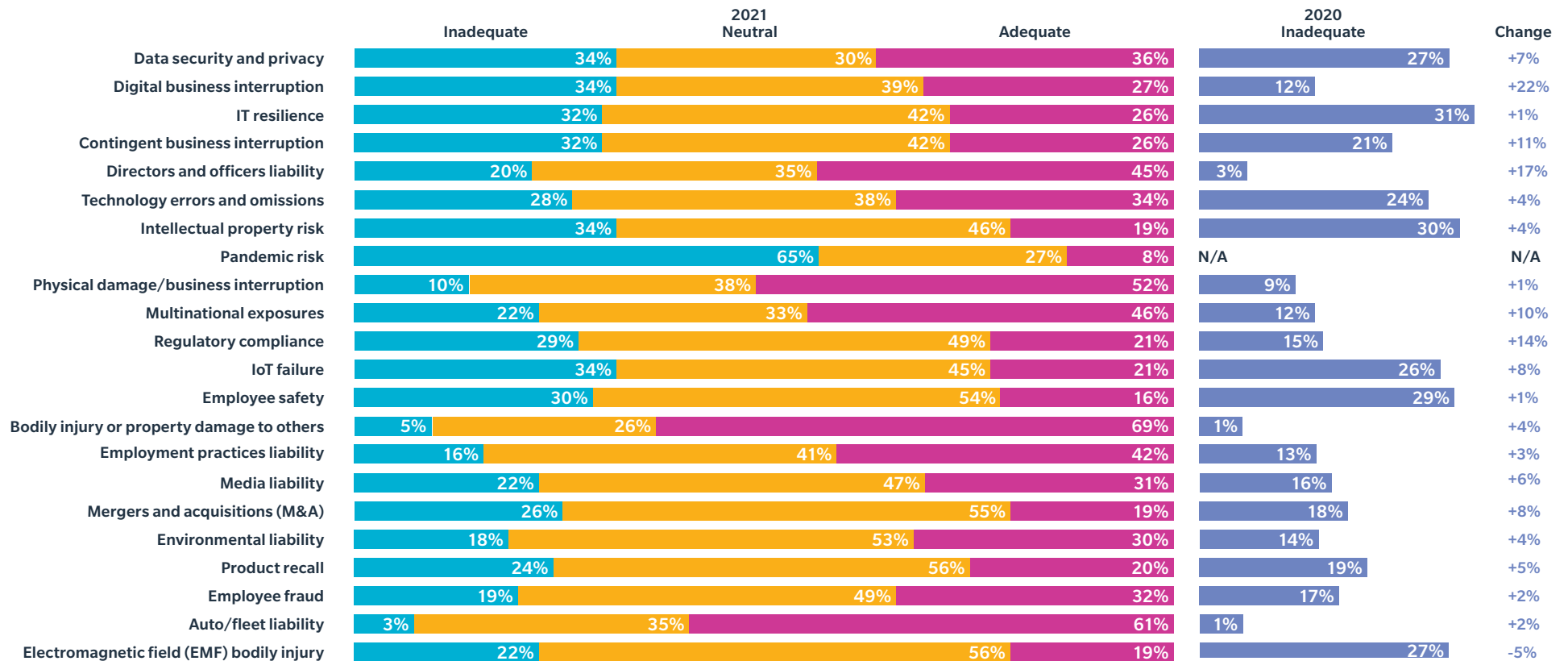
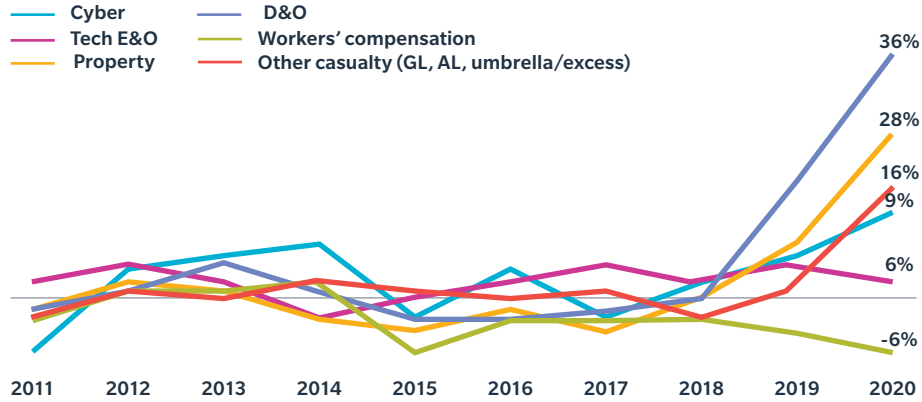


FIGURE 6

Average insurance prices for tech companies have risen significantly since 2019.

SOURCE: MARSH GLOBAL ANALYTICS



While tech companies' satisfaction with D&O coverage in particular has abruptly fallen in the last year, it's not their only challenge. Since late 2019, the commercial insurance market has grown more difficult for many buyers. In 2020, D&O pricing for tech companies increased nearly 40%, while property pricing increased nearly 30% (see Figure 6). Pricing for cyber, tech E&O, and casualty coverage (excluding workers' compensation) also rose. Beyond seeking pricing increases, insurers are also deploying capital more judiciously, narrowing terms and conditions, and applying greater underwriting scrutiny.

These difficult conditions have prompted many tech industry leaders to explore new approaches, the most frequent being increased risk retention. More than three in five of respondents to our survey are increasing retentions, while another third are reducing limits (see Figure 7).

FIGURE 7

Three-fifths of tech industry insurance buyers are increasing retentions, while more than half are exploring integrated, structured, or alternative risk programs.

SOURCE: MARSH 2021 GLOBAL TECHNOLOGY INDUSTRY RISK STUDY



Using captives to underwrite exposures is growing more popular, as is the introduction of new insurers throughout program layers, especially in property. Many tech companies are also shifting D&O premium expenditures from ABC coverage, to Side-A D&O only while also reexamining whether blended technology E&O/cyber programs are the right approach for them. And some are exploring parametric, structured risk, and integrated risk solutions to manage a variety of risks.

The changing market has also highlighted a need for companies to better prepare for upcoming renewals. Those companies that are best managing the difficult environment are:



Setting clear strategies before beginning renewal discussions. Working with experts, tech companies' risk management teams can create plans based on their unique risk appetites, cultures, and budgetary considerations. They can also focus on articulating their primary objectives — for example, reducing premium expense or ensuring robust coverage (even if at an additional cost) — and clarify their priorities.



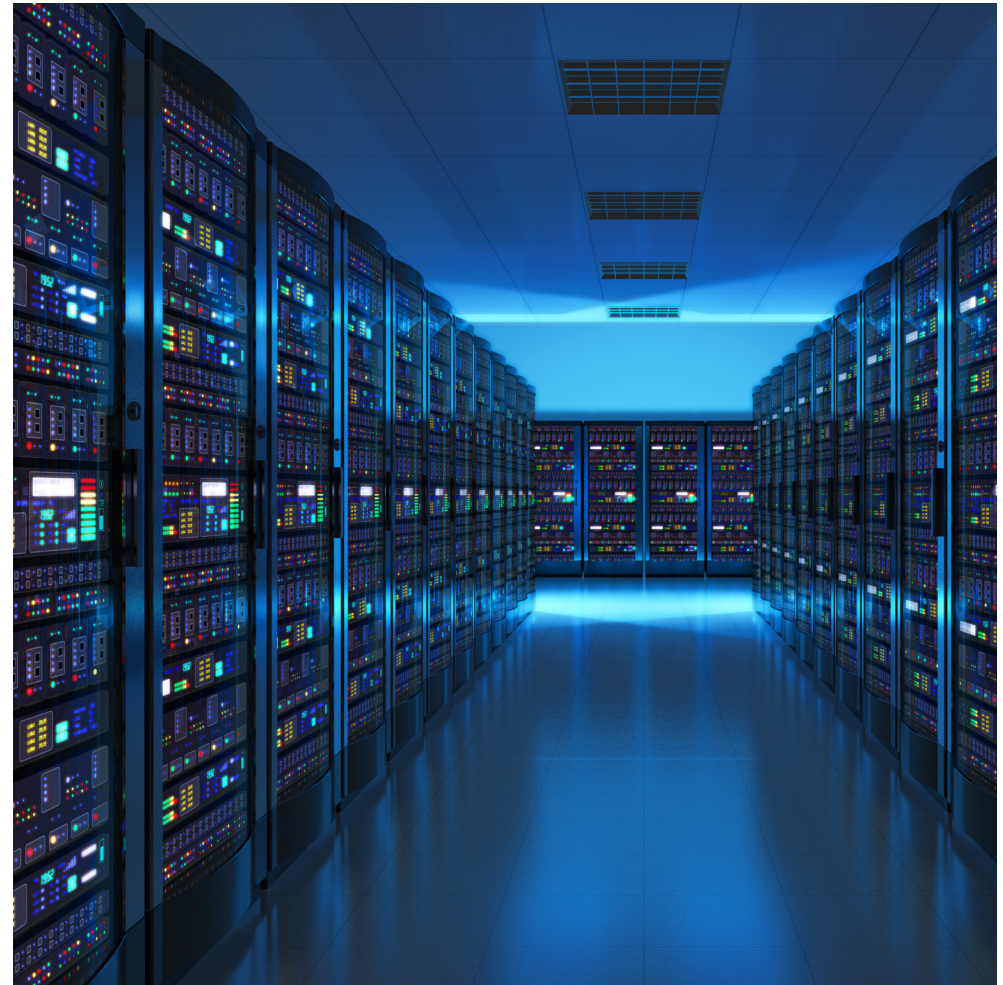
Demonstrating knowledge of critical risks. For example, understanding supply chain exposures — including second- and third-tier vulnerabilities — can be crucial, especially given insurers' concerns about the potential for complex, systemic risks.



Highlighting steps taken to reduce risks. Detailing the implementation of multifactor authentication, for example, for access to critical resources and accounts can help provide a more complete picture to underwriters and better differentiate risk.



Using analytics to back up the qualitative story. Robust data on property and casualty exposures, such as wildfires, is becoming increasingly central to making informed decisions about insurance program structures and presenting risks in a more favorable light.



A Crisis of Confidence

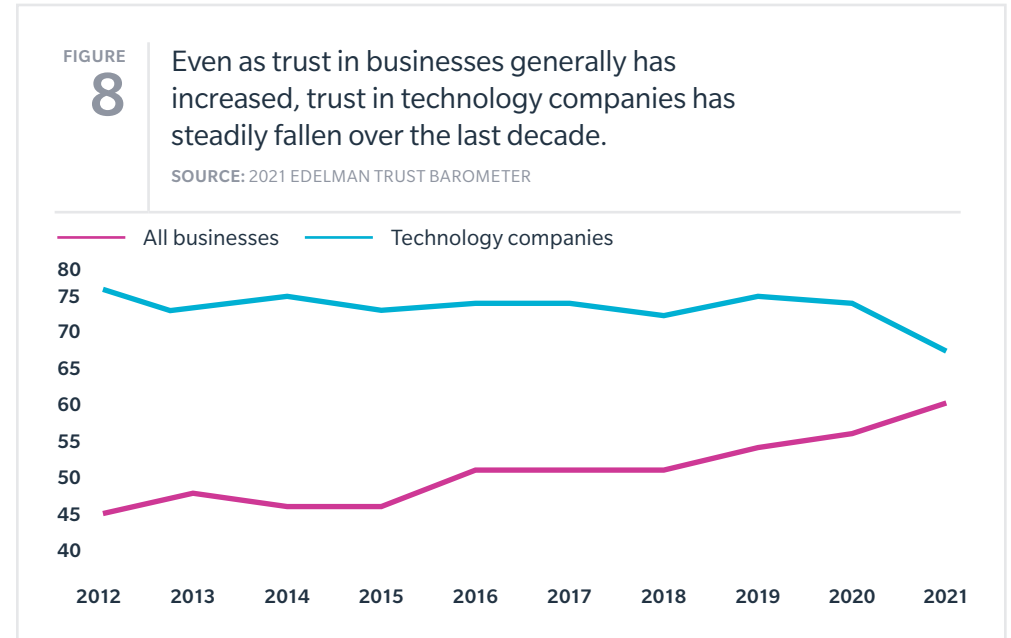
In recent years, public trust in many institutions — including governments and news media — has fallen significantly. Businesses, however, are perceived as both competent and ethical. Businesses are more trusted than governments in 18 of the 27 countries examined in the 2021 Edelman Trust Barometer.

Despite consumers' trust in businesses as a whole increasing over the last decade, perceptions of individual industries vary. And while the technology sector is ahead of several other industries, the long-term trend is troubling: Trust in technology companies has fallen nine points in Edelman's index since 2012 (see Figure 8).

Maintaining the public's trust is central to technology companies' success, arguably now more than ever. Recent high-profile data breaches and news reporting of their work with governments on surveillance tools have eroded tech companies' reputations. Social media companies in particular have been in the spotlight, receiving criticism for their alleged censorship of political viewpoints, their failure to stem misinformation, and foreign meddling in social networks.

Notably, nearly half of all Americans surveyed by the Pew Research Center believe [the tech sector should be subject to more stringent regulation](#). As technology has become an integral part of everyday life, concerns have been raised about tech companies' privacy controls, business practices, and the industry's size and outsize influence. Both the federal government and those of several states have focused on the industry, calling on executives to testify and introducing legislation to rein in the sector. Some members of Congress have even called for large tech companies to be broken up.

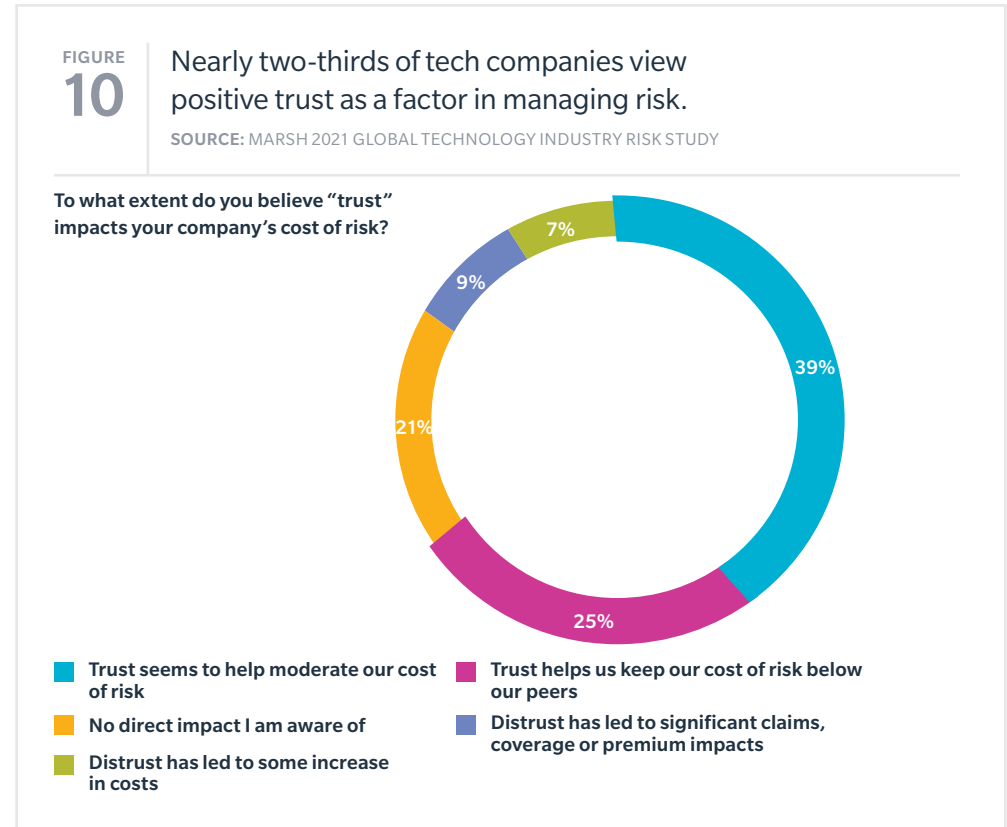
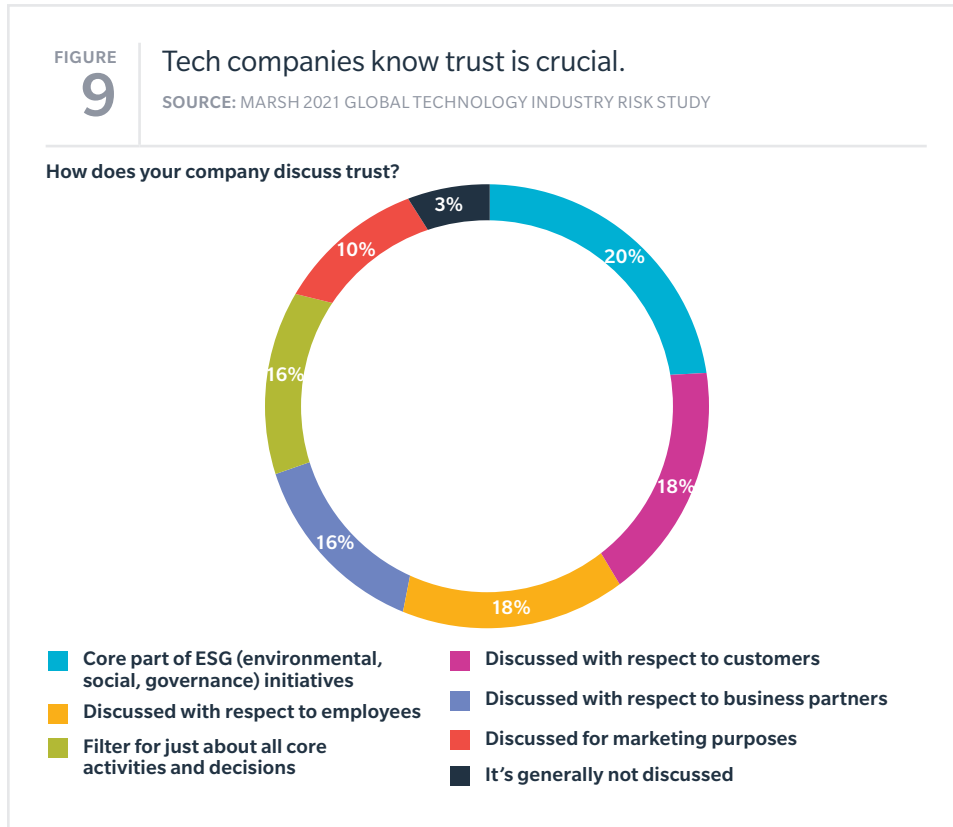
At the same time, the stakes have been raised in the last year for companies across all industries. The death of George Floyd in Minneapolis and others around the country accelerated momentum



in 2020 for Black Lives Matter and other social justice movements. Activists — including consumers, employees, and shareholders — have grown more ambitious, with their focus expanding beyond police forces and governments to include businesses. And they now increasingly expect companies to not only behave responsibly but to also take public stances on social issues.

Technology industry companies surveyed by Marsh acknowledge the importance of public trust to their enterprises. Only 3% of respondents say “trust” is not discussed within their organizations, while more than a third say it’s either a critical component of environmental, social, and governance (ESG) initiatives or a lens through which they view many core activities and decisions (see Figure 9).

Encouragingly, tech companies also acknowledge the importance of maintaining the trust of several constituencies, including customers, employees, and business partners. And almost two in three believe that establishing greater trust can help moderate their cost of risk or keep it below that of their peers (see Figure 10).



When asked to identify what defines trust, the protection and appropriate use of data topped the list (see Figure 11). Respondents also highlighted a number of issues that shareholder activists and others have focused on in recent years, including acting in a socially and environmentally responsible manner and not exploiting labor.

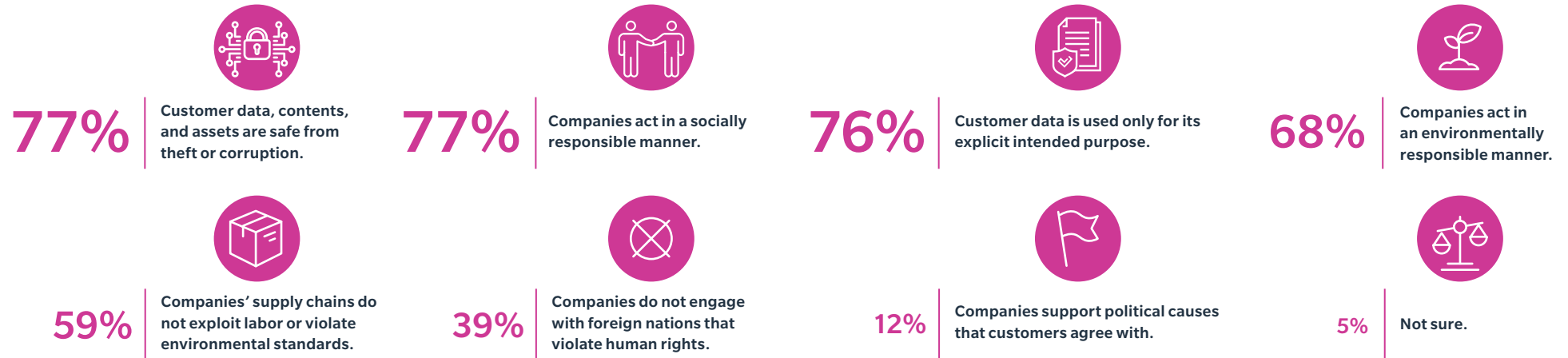
With trust and perceptions of tech companies — by consumers, employers, shareholders, regulators, and others — coming to the fore, tech companies will continue to focus on this issue. Among other actions, tech companies will increasingly seek to quantify or measure trust and the financial and operational implications of greater trust — or a lack of it. Risk professionals and others will also be challenged to use trust to their financial advantage, including potentially incorporating measures of trust in meetings with underwriters.

FIGURE
11

Data protection, social responsibility and ESG define trust for technology companies.

SOURCE: MARSH 2021 TECHNOLOGY INDUSTRY RISK STUDY

How does your company define trust? (Select all that apply)



Where Do Tech Companies Go From Here?

With technology companies facing new and evolving pressures, six areas of focus will be key in 2021:



Aggressive cost management: Sustained increases in insurance pricing requires a conscious and forceful approach to minimize premium expenses and other risk management-related costs.



Risk strategy planning and reporting: Changes in both risks and costs and the emergence of alternative program designs requires a high level of engagement with a widening range of executive and board-level stakeholders.



Alternative program design: Traditional insurance structures and pricing models are being increasingly challenged by tech sector companies. From integrated risk, to captives, to parametrics, the time is right to begin understanding and considering alternative approaches.



Digital risk management: The time is now for tech companies to move beyond inefficient legacy day-to-day and administrative models for insurance and risk management.



Risk assessments and modeling: Uncertainties in the global tech supply chain along with growing cyber and IoT risks calls for diligence in rethinking a range of historic, expected, emerging, and potential exposures.



Investing in building trust: With trust and ESG commitments now foundational to tech companies' ongoing success, risk professionals must further commit to both taking action and developing risk-related solutions for their organizations.



Additional Insights

This survey and report are part of the thought leadership that Marsh & McLennan produces each year, which includes research, insights, events, and commentary on topics of interest to our clients.

To register for or view a replay of Marsh's global technology risk forum, scheduled for March 23-24, 2021, visit marsh.com.

For more information on upcoming reports, events, and thought leaderships, contact your Marsh representative or email cmt@marsh.com to be added to our mailing list.

[World Economic Forum Global Risk Report 2021](#)

[2020 AFP Risk Survey Report](#)

[COVID-19 Dashboard](#)

[Back to Work Guide](#)

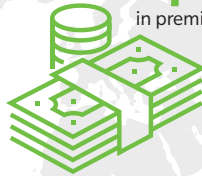
Marsh's Technology Industry Expertise

Served by a global network of

600+

dedicated tech risk management professionals.

Placing **\$2B** in premium annually.



Local, specialized tech expertise in

100+

global offices.

2000+

tech clients, globally.

Committed to the

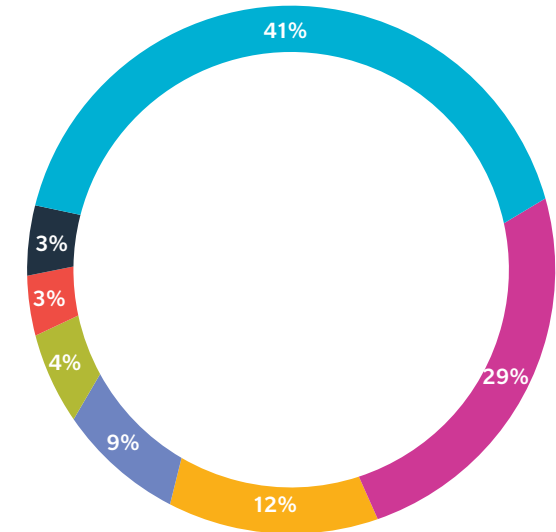
85%

of clients that are high-growth, middle-market companies.



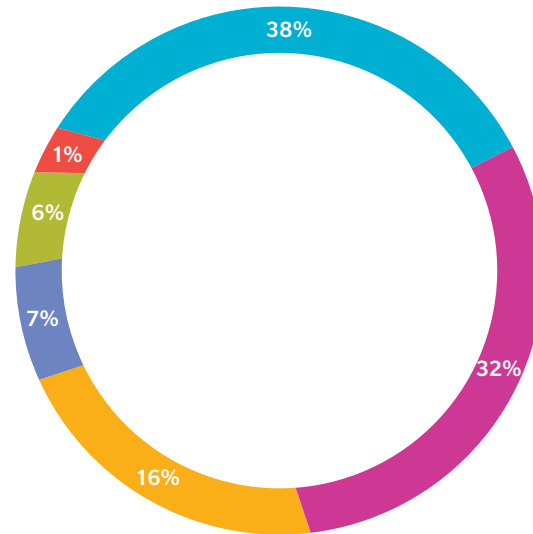
Survey Demographics

Role of Respondents



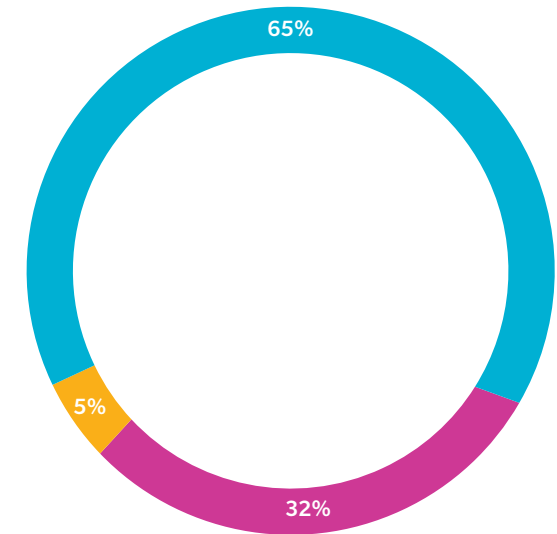
- Risk management
- Finance
- Operations
- Legal
- Human resources
- CEO, founder, investor
- IT

Respondent Company Headquarters



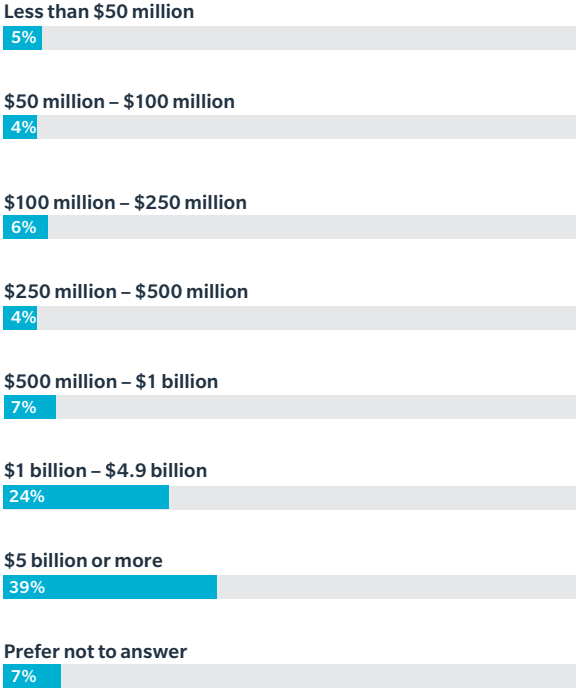
- Asia/Pacific
- United States
- United Kingdom/Ireland
- Canada
- Continental Europe
- Middle East/Africa

Respondent Company Ownership



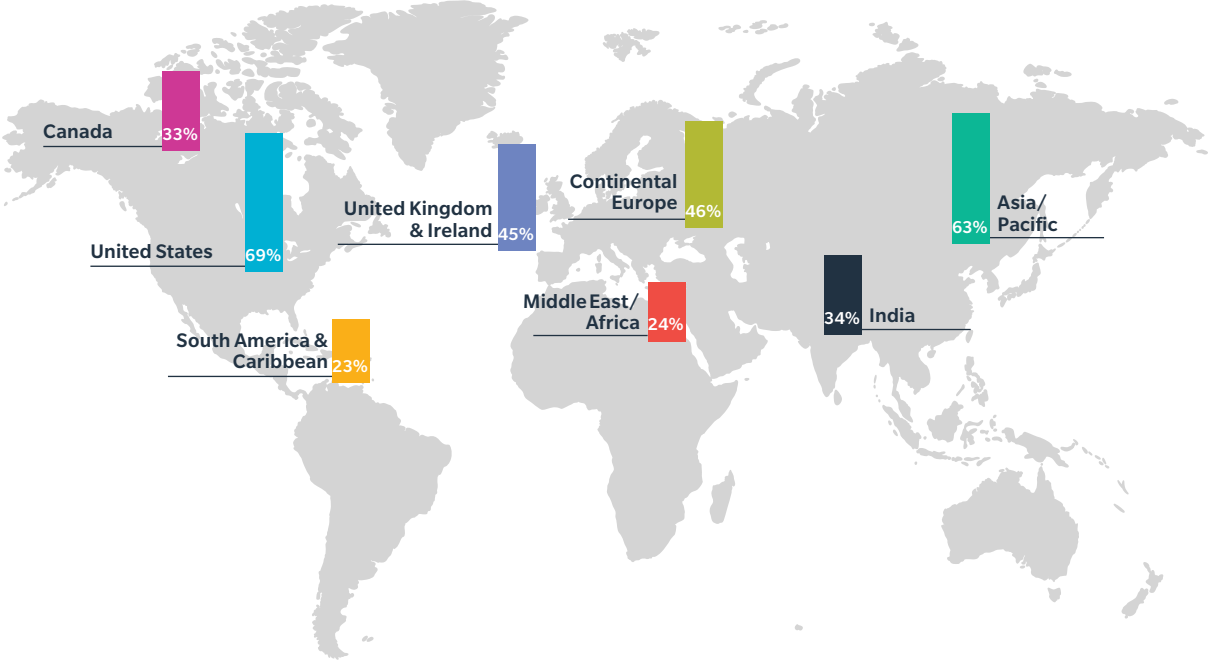
- Public company
- Private company
- Nonprofit

Respondent Company Revenue



Global Exposures

In what geographies does your company have risk exposures?



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ABOUT THIS REPORT

Marsh's Global Technology Industry Risk Study — now in its sixth year — draws from the survey responses of more than 170 technology risk professionals from around the world.



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