Global Climate Risk Barometer
September 2022

Building a better working world

When will Climate Disclosures start to impact decarbonization?

The better the question.
The better the answer.
The better the world works.

Contents

Foreword

Corporate reporting could be crucial to the decarbonization process. Within this context, a particularly important role is played by climate-related disclosures, which are increasingly based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Yet, climate disclosures are still not translating into practical strategies to accelerate decarbonization.

A notable development in corporate reporting over the past 12 months was the launch of the International Sustainability Standards Board (ISSB) at the COP26 climate change conference in November 2021. The ISSB is developing a comprehensive global baseline of sustainability disclosures for the capital markets and has already released its first two proposed standards.

Furthermore, in the US, the Securities and Exchange Commission (SEC) has proposed new rules to mandate climate risk disclosures, while Japan, New Zealand and the UK have all introduced rules requiring large companies to disclose climate-related financial information on a mandatory basis. In the EU, the European Financial Reporting Advisory Group (EFRAG) has published a draft of the proposed climate standard that companies will be required to use when reporting under the Corporate Sustainability Reporting Directive (CSRD).

In concert with political and regulatory activity in the space, companies are making ambitious announcements to be net zero by a specified date in the future, often by 2050. However, they are providing little detail about how they intend to meet these targets, leading many investors to intensify the pressure on companies to publish their transition plans.

How an organization responds to climate risks and opportunities can be a major strategic consideration with long-standing implications for its own future prospects, as well as those of our planet. In fact, 86% of the corporate executives and managers, who responded to the latest EY Long-Term Value and Corporate Governance Survey, say that a focus on environmental, social and governance (ESG) issues, and sustainable, inclusive growth has been critical to building trust with stakeholders in today's uncertain times.

It can; therefore, be vital that organizations embed the findings from their scenario analysis into their financial management, risk management and strategy-setting practices. In particular, boards and senior management teams should be using their disclosures to inform stakeholders, particularly investors. They can show how they are understanding and managing their risks in practice, rather than simply treating scenario analysis as a theoretical analysis of the potential impacts of climate change on the current business model. In addition, such analysis can sometimes be a siloed exercise that is not integrated into broader enterprise risk management systems.

This is the fourth EY Global Climate Risk Disclosure Barometer, a comprehensive analysis of disclosures made by more than 1,500 companies across 47 countries. It aims to help your own board and management team reflect on your organization's approach to climate disclosures and the practical actions you can take to align your organization's strategy with the decarbonization of the global economy.

Global temperatures continue to rise and yet we are still far from where we need to be, in terms of allocating capital to the transition process. While disclosure facilitates decarbonization, words alone cannot address the huge challenge we face. It is time to move from disclosure to action.

Dr. Matthew Bell
EY Global Leader of Climate Change and Sustainability Services

[1] Long-Term Value and Corporate Governance Survey, EY, 2022.

Executive summary

The research highlights that companies are not sufficiently referencing the financial impact of climate change in their financial statements.

The EY Global Climate Risk Disclosure Barometer shows that, while companies continue to improve the coverage and quality of their climate disclosures, they may not be considering a holistic view of their physical and transition risks, as well as the opportunities that can arise from these risks. The research also highlights that companies are not sufficiently revealing the financial impact of climate change in their financial statements.

The methodology of this year's study was updated to provide a more definitive and robust scoring around disclosure quality. The revised scoring matrix scored companies on a scale of zero to five, compared with the previous matrix, which provided scores of zero, one, three and five. For more on the methodology, see *About this research* on page 34.

These are some of the key findings from the research:

- The score for coverage of TCFD recommendations is 84%, up from 70% in 2021 for the corporate reports analyzed, while the average score for quality is 44%. The gap between coverage and quality suggests that, while more companies are reporting on climate risk, they are struggling to provide meaningful disclosures around the challenges they face.
- Strategy is the element that has seen the most improvement, with the average strategy score increasing to 42%, up from 38% in 2021. This most likely reflects greater regulation around climate disclosure and companies responding to investor pressure to publish transition plans.
- Companies that disclose through the Carbon Disclosure Project (CDP) global disclosure system achieved both higher coverage and higher quality scores.
- South Korea, southern Europe, central and eastern Europe, and Ireland lead the Barometer, in terms of the quality of their climate disclosures.
- From an industry sector perspective, the energy sector has the highest coverage and quality score, followed closely by insurance. Insurance achieved a 34% increase in quality year-on-year. Another financial services sector – financial asset owners and managers – improved quality by 40%.
- Nearly half (49%) of companies featured in this year's Barometer had conducted scenario analysis. The most commonly referenced scenarios were RCP 8.5 and RCP 2.6, suggesting that the analysis of physical risks is top of mind for businesses. The most common time horizons referenced were 2040-50, while 2027 also featured prominently for carbon pricing scenarios.
- Up to 75% of companies performed risk analysis. They focused more or less equally on both physical and transition risk. Furthermore, 62% of companies undertook opportunity analysis, with products and services being the most commonly listed opportunities.
- Almost 61% of companies have disclosed decarbonization strategies. The energy sector ranks highest among nonfinancial sectors, with 81% of the companies disclosing a specific net-zero strategy or transition plan. Meanwhile, the agriculture, food and forest products sector ranks lowest among nonfinancial sectors. In the financial sector, financial asset owners and managers rank lowest, in terms of the disclosure of their decarbonization strategy.
- 29% of companies referenced the financial impact of climate change in their statements, as both qualitative and quantitative aspects. This result shows that, while companies are improving the coverage and quality of disclosures, they are struggling to bring financially material information together in a meaningful way.

1 Coverage and quality

84%

Overall, coverage of TCFD recommendations stands at 84%, a steep increase from 70% in 2021.

More than five years have passed since the TCFD finalized its recommendations for disclosing climate-related financial information. During that time, companies around the world have increasingly embraced those recommendations across the four elements of governance, strategy, risk management, and metrics and targets.

Nevertheless, while much progress has been made, companies' climate disclosures are not yet as comprehensive as investors, regulators and other stakeholders would like them to be. Furthermore, the disclosure of climate risk does not yet appear to be having a significant real-world impact, in terms of accelerating the decarbonization process.

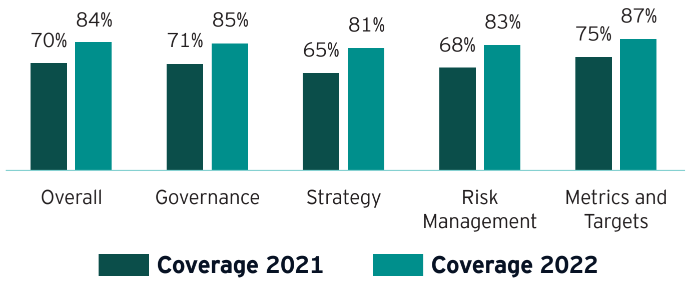
Coverage

Coverage is defined as a company providing some level of information that complies with each of the recommendations, regardless of the quality of information provided.

It is clear from the findings of this year's Barometer that C-suites and boards around the world continue to prioritize climate risk reporting. Overall, coverage of TCFD recommendations stands at 84%, a steep increase from 70% in 2021. What is more, coverage has increased across all four elements of the recommendations.

This increase in coverage can be attributed to a number of factors. In some jurisdictions, such as France, Japan and the UK, companies are responding to the demands of their regulatory environment. In other jurisdictions, companies are voluntarily choosing to do this reporting, both as a way to identify, manage and mitigate their own risk, and to better engage with investors, employees, and customers on climate-related issues.

Figure 1. Coverage has increased across all four elements of the recommendations



Quality

Quality relates to the extent to which a company's disclosure meets all 11 requirements of the TCFD's recommendations. It considers whether a company has provided well-developed or market-leading disclosure of a particular aspect of climate risk or whether disclosure is restricted to a limited discussion, or not even published at all.

The 2022 Barometer found that, despite the changes to the scoring matrix, there have only been small changes to the quality of climate risk disclosures made by companies over the past year. Overall, the average quality score was just 44% of the maximum possible score across the 11 recommendations, up from 42% in 2021.

Furthermore, there was very limited year-on-year improvement across three of the elements: governance, risk management, and metrics and targets, and in some sectors, overall quality was lower than in the prior year.

Companies' lower scores on disclosure quality, compared with disclosure coverage, potentially suggest that, while more companies are reporting on climate risk, they are struggling to provide meaningful disclosure around the challenges they face. Nevertheless, it was notable from the research that jurisdictions that either have, or are moving toward, mandatory reporting tend to have better quality reporting as well as better coverage.

Figure 2. Small changes to the quality of climate risk disclosures

Strategy

The one element of the TCFD framework that showed a marked improvement in relation to quality of disclosures this year was strategy. In previous versions of the Barometer, strategy lagged behind the other three elements, due to the tough questions it posed around how companies were integrating climate-related risks and opportunities into their business strategies, and, possibly, building resilience through diversification, allowing for different climate futures that may unfold.

This year, however, performance across all four pillars was broadly similar, with the average quality score for strategy being 42%, up from 38% in 2021. Similarly, strategy showed the greatest improvement in terms of coverage, reaching 81% in 2022, up from 65% in 2021.

This enhanced focus on strategy reflects the changing political and regulatory landscape around climate risk disclosures, as well as companies' growing awareness that the future will likely require deep decarbonization. The newly formed ISSB is working on two proposed standards for sustainability disclosures, with strategy being an important component of both, alongside the other three pillars of governance, risk management and targets.[2]

Furthermore, investors are putting companies under pressure to draw up and publish transition plans that outline how their organization could adapt as the world transitions toward a low-carbon economy. For instance, investor-led initiative Climate Action 100+ is engaging with 167 of the world's largest corporate emitters of greenhouse gases to drive faster action on climate change in line with the global goal of reaching net-zero emissions by 2050 or sooner.[3]

Pressure to publish transition plans is set to further intensify in the near term and some jurisdictions are looking to develop specific frameworks for climate transition plans. For example, the UK Government has established the Transition Plan Taskforce (TPT) to develop a "gold standard" for transition plans.[4] Meanwhile, in March, the United Nations launched a High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities, with the aim of developing stronger and clearer standards for net-zero emissions by businesses (as well as investors, cities and regions) and accelerating their implementation.[5] Certain sectors are also paying particular attention to transition plans, with financial services being a notable example.

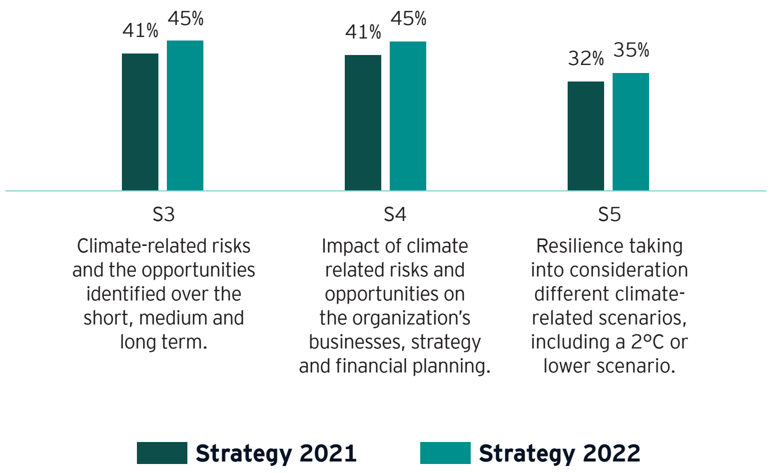
[2] "ISSB delivers proposals that create comprehensive global baseline of sustainability disclosures," IFRS Foundation website, https://www.ifrs.org/news-and-events/news/2022/03/issb-delivers-proposals-that-create-comprehensive-global-baseline-of-sustainability-disclosures, accessed 20 July 2022.
[3] *2021 Year in Review: A Progress Update," Climate Action 100+ website, https://www.climateaction100.org/wp-content/uploads/2022/03/Climate-Action-100-2021-Progress-Update-Final.pdf, accessed 20 July 2022*
[4] "Government launches consultation on 'gold standard' framework for climate transition plan," Edie website, www.edie.net/government-launches-consultation-on-gold-standard-framework-for-climate-transition-plans, accessed 20 July 2022.
[5] "UN's High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities," UN website, https://www.un.org/sg/en/content/sg/personnel-appointments/2022-03-31/expert-group-the-net-zero-emissions-commitments-of-non-state-entities%C2%A0

The greatest improvement in disclosure quality around strategy is related to companies disclosing the impact of climate-related risks and opportunities on their business, strategy and financial planning. There was also some improvement in companies identifying climate-related risks and opportunities over the short-, medium- and long-term, and companies making assessments of their resilience, taking into consideration different climate-related scenarios, including a 2°C or lower temperature rise scenario.

It is encouraging to see companies paying greater attention to strategy disclosures, including different scenarios. This suggests they are factoring climate risks and opportunities into their long-term decision-making. Furthermore, when companies provide climate-related disclosure around strategy, they provide valuable insights that help investors and other stakeholders to better understand the potential impacts of climate change on their organization.

While there has been an improvement in the coverage and quality of disclosures, strategy still has the lowest overall score of the four TCFD elements. This may well be due to the fact that companies are struggling to translate targets into actual business strategy and to embed climate risk and opportunities into their business and financial plans.

Figure 3. Improvements seen across all three strategy recommendations



Impact of CDP

It is no coincidence that companies using the CDP global disclosure system were more likely to achieve both higher coverage and higher quality scores in this year's Barometer. In 2018, CDP redesigned its annual climate change questionnaire to align with the TCFD recommendations. This resulted in disclosing companies having "ready-to-go material climate and natural capital disclosures" that they could use for their annual reports.[6]

Overall, the average quality score for companies disclosing through CDP was 44%, compared with 33% for companies that did not disclose through CDP. Similarly, the average coverage score for companies disclosing through CDP was 84%, compared with 80% for those that did not. The process of completing the CDP questionnaire involves discipline and detailed analysis that helps to improve both the coverage and quality of reporting.

Nevertheless, it is important to note that, while CDP questionnaires are valuable, they are not subject to the same level of governance and scrutiny as annual reports. So, companies that are committed to high-quality climate disclosures should provide confidence that they report the same information in their annual reports as in their CDP questionnaires.

[6] "On the 5-year anniversary of the TCFD, a critical reminder to companies," CDP website, https://www.cdp.net/en/articles/climate/on-the-5-year-anniversary-of-the-tcfd-a-critical-reminder-to-companies, accessed 20 July 2022.

2 Market focus

High-performing markets from previous years, such as the UK, Japan, South Korea and Canada, continue to perform well.

Continuing the trend of previous years, the markets that produced the most advanced reporting, in terms of both coverage and quality, benefit from strong climate disclosure regulations, proactive investors who are lobbying for change, and clear signals from policymakers about the direction of travel. Hence, the high-performing markets from previous versions of the Barometer, such as the UK, Japan, South Korea and Canada, continue to perform well in this year's research.

Topping the table, in terms of both coverage (99%) and quality (62%), is the UK. Japan comes a close second with a coverage score of 96% and a quality score of 56%. The scores of these countries reflect their advanced regulatory environments, when it comes to climate disclosures.

Some notable improvements in disclosure quality can be seen in many European markets. Emerging markets have also improved considerably since last year, in terms of both their coverage and quality.

In a number of markets, including India, Greater China, the Middle East and Southeast Asia, there is scope for further improvement, despite their overall increase in performance. This improvement is more likely to happen if companies in these markets come under more scrutiny from investors and if regulators signal an intention to move toward mandatory climate disclosures.

Figure 4. Improvements in coverage across all markets

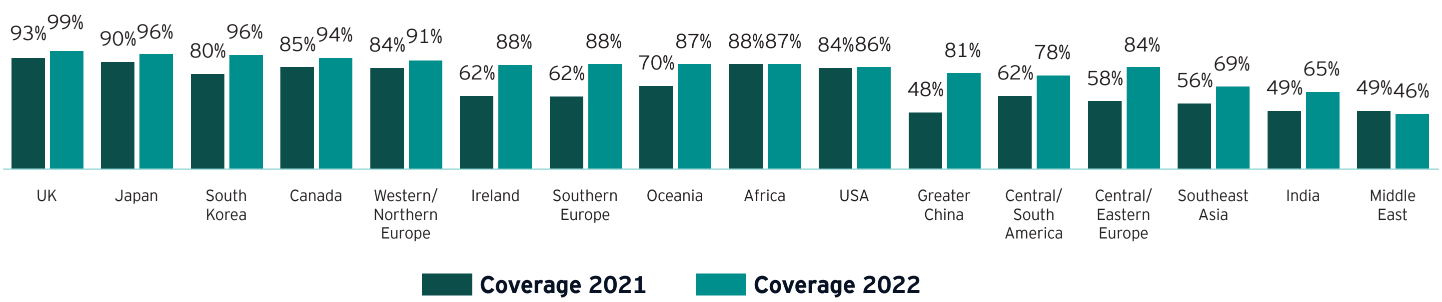
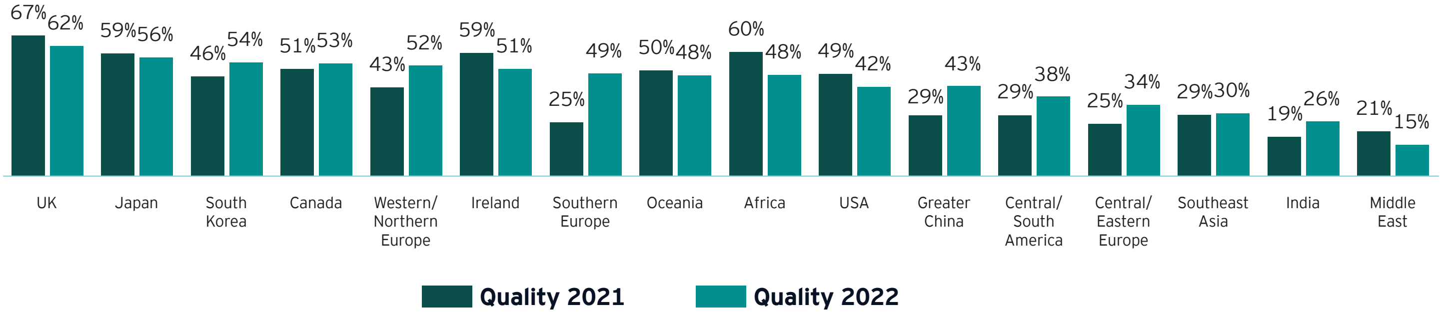


Figure 5. Some notable improvements in quality in many markets



Central and South America

Several countries in Central and South America are targeting Net Zero greenhouse gas emissions' by 2050, including Argentina, Colombia and Costa Rica.[7] Brazil is also committed to achieving Net Zero greenhouse gas emissions by this date, and its central bank has published new rules on social, environmental and climate-related disclosures, which will be effective from December 2022.[8] Mexico has created a sustainable finance committee within its Financial System Stability Council. The committee has several working groups, including one focused on improving the amount and quality of disclosures and reporting by nonfinancial and financial institutions.[9]

United Kingdom

Since April 2022, more than 1,300 of the largest companies and financial institutions in the UK have had to disclose climate-related financial information on a mandatory basis, in line with the TCFD recommendations.[10] Companies had to prepare for this deadline, which explains why the UK's coverage of climate disclosures is near-universal, according to the Barometer. Full mandatory climate-related financial disclosure requirements are set to come into force across the UK economy by 2025, going beyond the existing "comply or explain" approach. The UK has also formed the TPT to develop a gold standard for climate transition plans. The TPT aims to help drive decarbonization by ensuring that financial institutions and listed companies develop and publish rigorous and robust transition plans that detail how they could adapt and decarbonize as the UK moves toward a net-zero economy by 2050.[11]

[7] "Which countries have a net-zero carbon goal?" Climate Home News website, https://www.climatechangenews.com/2019/06/14/countries-net-zero-climate-goal, accessed 20 July 2022.

[8] "New regulation on social, environmental and climate-related disclosures," Banco Central do Brasil website, www.bcb.gov.br/content/about/legilation_norms/BCB_Disclosure-GRSAC-Report.pdf, accessed 20 July 2022

[9] "Banco de México declaration towards UN Climate Change Conference of the Parties (COP26)," Banco de México website, https://www.banxico.org.mx/financial-system/d/%7B80FDF3B4-F5C1-E88F-442E-EF77C6A7BE59%7D.pdf, accessed 20 July 2022.

[10] "UK to enshrine mandatory climate disclosures for largest companies in law," UK government website, https://www.gov.uk/government/news/uk-to-enshrine-mandatory-climate-disclosures-for-largest-companies-in-law, accessed 20 July 2022.

[11] "HM Treasury launches UK Transition Plan Taskforce," HM Treasury website, https://www.e3g.org/news/hm-treasury-launches-uk-transition-plan-taskforce, accessed 22 July 2022.

Middle East

As the lowest performer on the Barometer, in terms of both coverage and quality, the Middle East has plenty of scope to improve its climate disclosures. The region is less advanced than other markets, in terms of its regulatory framework for ESG reporting. This may be linked to its carbon-intensive economy and strong links to the fossil fuel industry. Ultimately, it may be down to investors and financial institutions to drive change in the region by demanding disclosures from companies that are looking to raise capital.

Africa (including South Africa)

Africa experienced similar results to last year's Barometer, in terms of both coverage and quality of disclosures. Led by its mining industry, South Africa is already a comparative leader in climate reporting, and the Johannesburg Stock Exchange is in the process of developing both sustainability and climate change disclosure guidance.[12]

Greater China

China, the world's biggest emitter of greenhouse gases,[13] has set a target of reaching Net Zero greenhouse gas emissions by 2060. Nevertheless, the country currently has no mandatory requirement for companies to disclose climate-related financial and nonfinancial information in their annual reports. There has been some progress with improving climate disclosure policies in the last year or so, with the China Securities Regulatory Commission encouraging voluntary reporting to reduce carbon emissions and the People's Bank of China publishing guidelines for environmental disclosures by financial institutions, covering at least one disclosure per year. Deeper regulation is probably required, however, to improve the coverage and quality of climate disclosures in China.[14]

India

India continues to lag behind most other markets, in terms of both the coverage and the quality of its disclosures. That said, the Barometer did record a significant year-on-year improvement in coverage, which was up to 65% from 49% last year. This increase is almost certainly linked to new rules published by the Securities and Exchange Board of India. These rules require the country's 1,000 largest companies to produce a business responsibility and sustainability report from the 2022-2023 financial year onward. Companies were encouraged to produce the reports on a voluntary basis for the 2021-2022 financial year.[16]

Japan

New mandatory rules for climate-related disclosures took effect in Japan in April 2022. Under the rules, developed by the country's Financial Services Agency, around 4,000 large companies, including those listed on the Tokyo Stock Exchange, are required to report their greenhouse gas emissions and make other climate-related disclosures in accordance with the TCFD framework. The rules are due to be extended to all companies that submit annual securities reports for the 2023 financial year.[15]

South Korea

The quality of disclosures made by companies in South Korea has increased considerably over the past year. This could be linked to South Korea's Financial Services Commission announcing plans to improve the country's corporate disclosure rules, including guidance to promote voluntary disclosure of sustainable management reports by listed companies. Mandatory disclosure of sustainable management reports are likely to be gradually expanded to all companies listed in the Korea Composite Stock Price Index (KOSPI) from 2030.[17]

Southeast Asia

Southeast Asia is highly vulnerable to the effects of climate change. While the region lags behind most others in terms of the coverage and quality of its climate-risk disclosures, it has made some progress over the past year, particularly with respect to coverage. This is probably due to South Asia following global trends around climate disclosures and regulators paying greater attention to the TCFD recommendations.

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12 "JSE's Sustainability and Climate Disclosure Guidance," JSE website, https://www.jse.co.za/our-business/sustainability/jses-sustainability-and-climate-disclosure-guidance, accessed 20 July 2022.

13 "Report: China emissions exceed all developed nations combined," BBC website, https://www.bbc.co.uk/news/world-asia-57018837

14 "How should China improve climate disclosure in the finance sector?" China Dialogue website, https://chinadialogue.net/en/business/how-should-china-improve-climate-disclosure-in-the-finance-sector, accessed 20 July 2022.

15 "Japan to require 4,000 companies to disclose climate risks," Nikkei Asia website, https://asia.nikkei.com/Spotlight/Environment/Climate-Change/Japan-to-require-4-000-companies-to-disclose-climate-risks, accessed 20 July 2022.

16 "SEBI issues Circular on 'Business Responsibility and Sustainability Reporting by listed entities'," Securities and Exchange Board of India website, https://www.sebi.gov.in/media/press-releases/may-2021/sebi-issues-circular-on-business-responsibility-and-sustainability-reporting-by-listed-entities-_50097.html, accessed 21 July 2022.

17 "FSC Plans to Improve Corporate Disclosure Rules," Financial Services Commission website, www.fsc.go.kr/eng/pr010101/75177, accessed 20 July 2022.

Some notable improvements in disclosure quality can be seen in many European markets.

Spotlight on the EU

Alexis Gazzo, Climate Change Leader, EY & Associés

As part of the European Green Deal, the EU has set itself a binding target of achieving Net Zero greenhouse gas emissions by 2050, including an intermediate step toward Net Zero greenhouse gas emissions; it has raised its 2030 climate ambition, committing to cutting emissions by at least 55% by 2030. The EU is working on the revision of its climate-, energy- and transport-related legislation under the so-called "Fit for 55" package, in order to align current laws with the 2030 and 2050 ambitions.

In addition, the European Commission has proposed CSRD to improve the existing reporting requirements of the EU's Non-Financial Reporting Directive (NFRD). This will more than triple the number of companies in the EU that are required to report on sustainability data, including climate-related information.[18]

Approximately 49,000 large and listed companies in the EU will likely need to report in compliance with European Sustainability Reporting Standards (ESRSs) developed by the EFRAG. Companies already subject to NFRSD will have to report for financial years beginning on 1 January 2024 (report to be published in 2025) and large companies for financial years beginning on 1 January 2025 (report to be published in 2026).

Under the proposed standard on climate change, ESRS E1, companies are expected to be required to disclose information on their emissions reduction targets and how their targets are aligned with the 2015 United Nations Paris Climate Change Conference (Paris Agreement) goals and limiting global warming to 1.5°C. Also, companies are also likely to be required to report on the potential financial effects of material physical risks and material transition risks, as well as climate-related opportunities. Another new mandatory disclosure under the standard could require companies to report on their Scope 3 emissions, including emissions related to (i) upstream purchasing, (ii) downstream sold products, (iii) goods transportation, (iv) travel, and (v) financial investments.[19]

Another important development is the launch of the EU Taxonomy for sustainable activities, which went live at the start of 2022. The taxonomy has been designed to help protect against greenwashing and helps to channel capital toward genuinely green activities by offering a classification system that provides companies, investors and policymakers with appropriate definitions for which activities can be considered environmentally sustainable.[20]

The EU has also developed its Sustainable Finance Disclosure Regulation, which sets out sustainability disclosure obligations for asset managers and other financial market participants, with the aim of improving transparency for investors. The regulation is scheduled to apply from 1 January 2023.[21]

This policy landscape helps to explain why this year's Barometer recorded some notable improvements, in terms of both coverage and quality of disclosures in many European markets. Southern Europe achieved a quality score of 52%, up from 43% last year, and its coverage score jumped from 62% to 88%. Ireland recorded exactly the same increase in coverage, while its quality score leapt from 25% to 49%. Meanwhile, in central and eastern Europe, coverage increased from 58% to 84%, while quality scored 43%, up from 29% last year.

Spotlight on Oceania

Pip Best, Climate Change and Sustainability Services Partner, Ernst & Young, New Zealand, and Fiona Hancock, Climate Change and Sustainability Services Director, Ernst & Young, Australia

Oceania is particularly vulnerable to the potential impact of global warming. Yet, despite the risks it faces, the region trails much of the world, in terms of both the coverage and the quality of its climate disclosures, according to this year's Barometer. A major reason for this is the historic lack of regulatory support for climate-related disclosures. Change is under way, however, which should lead to both the coverage and the quality of climate disclosures improving in future.

New Zealand has already passed legislation that makes climate-related disclosures mandatory with effect from the 2023 financial year for around 200 entities. These entities include large listed companies, insurers, banks, nonbank deposit takers and investment managers.[22]

[18] "Three ways businesses can help meet global climate goals," EY website, https://www.ey.com/en_gl/sustainability/three-ways-business-can-help-meet-global-climate-goals, accessed 15 July 2022.

[19] Exposure Draft: ESRS E1 – Climate change, European Financial Reporting Advisory Group, April 2022.

[20] EU taxonomy for sustainable activities, European Commission website, https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en, accessed 15 July 2022.

[21] Regulation on sustainability-related disclosure in the financial services sector, European Commission website, https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/sustainability-related-disclosure-financial-services-sector_en, accessed 21 July 2022.

[22] "Mandatory climate-related disclosures," New Zealand Ministry for the Environment website, https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/mandatory-climate-related-financial-disclosures, accessed 20 July 2022.

The Barometer shows that US companies have some work to do as they move toward detailed, mandatory climate disclosures.

Meanwhile, earlier this year, the Australian Prudential Regulation Authority issued guidance for banks, insurers and pension funds on managing and disclosing climate-related risks, including physical, transition and liability exposures. While the guidance did not create new obligations, it suggests that Australia is moving toward a mandatory regime.[23]

In addition, the Australian Federal Government passed legislation enshrining a pledge to cut carbon emissions by 43% by 2030 and to net zero by 2050.[24] Investors are demanding that companies make better disclosures about their climate-related risks and the country has seen a rise in civil lawsuits alleging greenwashing.

Concerned that greenwashing may prevent investors from making informed investment decisions and undermine confidence, the Australian Securities & Investments Commission has warned companies against making misleading and deceptive statements in relation to sustainability-related products. To improve the quality of disclosure, it has also encouraged voluntary disclosure in accordance with the TCFD.[25]

In Oceania, disclosure coverage increased significantly on this year's Barometer — up to 87% from 70%. In contrast, there was a smaller improvement in quality — up to 49% from 42%.

Spotlight on North America

Stephanie Hamilton, Climate Change and Sustainability Services Director, Ernst & Young, Canada

The US SEC is planning to mandate climate-risk disclosures by public companies with a view to providing investors with consistent, comparable and decision-useful information. The proposed rules are prescriptive in their disclosure requirements (more so than the TCFD), and companies would be required to disclose both forward-looking information and "certain disaggregated climate-related financial statement metrics that are mainly derived from existing financial statement line items" in notes to their financial statements. This would include the impact of the climate-related events and transition activities on company's consolidated financial statements.[26]

Additionally, under the proposed rules, some SEC registrants would be required to disclose Scope 3 emissions (emissions from the upstream and downstream activities in their value chain), if those emissions are material to investors or if the company has committed to including a target around Scope 3 emissions.

The Barometer shows that US companies have some work to do as they move toward detailed, mandatory climate disclosures.

While the coverage score for the US is 86%, a slight increase on last year, its quality score stands at 48%. This could be reflective of many US companies now reporting to CDP for the first time, which is highly aligned to the TCFD framework.

Canada has consistently performed strongly on the Barometer over time, in terms of both disclosure coverage and quality. Securities regulators have long emphasized that public company disclosures should cover material information, including material environmental matters, such as climate change.[27] After a public consultation late last year, they are expected to go ahead with more structured climate disclosure requirements using the TCFD framework in 2022.

Meanwhile, the Canadian government has also endorsed the TCFD framework and already made TCFD-aligned disclosures mandatory for 2023 for Crown corporations (government-owned entities that hold more than CA$1b in assets).[28] Crown corporations with fewer than CA$1b in assets will be expected to start reporting by 2024. Next, they are requiring federally regulated banks and insurance companies to provide disclosures on their climate-related risks and exposures, starting from 2024.[29]

[23] "Australian regulator issues long-awaited climate risk guidance," Reuters website, https://www.reuters.com/business/environment/australian-regulator-issues-long-awaited-climate-risk-guidance-2021-04-22, accessed 20 July 2022.

[24] "Australia passes a law for net zero emissions by 2050," Reuters website, https://www.reuters.com/world/asia-pacific/australia-passes-law-net-zero-emissions-by-2050-2022-09-08, accessed 8 September 2022."

[25] "How to avoid greenwashing when offering or promoting sustainability-related products," the Australian Securities & Investment Commission website, https://asic.gov.au/regulatory-resources/financial-services/how-to-avoid-greenwashing-when-offering-or-promoting-sustainability-related-products, accessed 12 July 2022.

[26] "Statement on Proposed Mandatory Climate Risk Disclosures," Securities & Exchange Commission website, https://www.sec.gov/news/statement/gensler-climate-disclosure-20220321, accessed 21 July 2022.

[27] "Task force on climate-related financial disclosures (TCFD): Overview", Chartered Professional Accountants Canada website, https://www.cpacanada.ca/en/business-and-accounting-resources/financial-and-non-financial-reporting/mdanda-and-other-financial-reporting/publications/tcfd-overview, accessed 21 July 2022.

[28] "Canada moves towards TCFD-aligned reporting", https://environment-analyst.com/global/107647/canada-moves-towards-tcfd-aligned-reporting, accessed 12 August 2022.

[29] "Climate Disclosures for Banks, Insurance Companies Beginning 2024," Report Adviser website, https://reportadviser.info/news/canada-introduces-mandatory-climate-disclosures-for-banks-insurance-companies-beginning-2024, accessed 21 July 2022.

3 Sector focus

All sectors that could be compared year-on-year recorded an increase in disclosure coverage in 2022 and the vast majority recorded improved quality.

Continuing the trend of previous Barometers, the sectors with the most significant exposure to transition risk generally scored higher for their disclosures in 2022, in terms of both quality and coverage.

Energy leads the way, with a coverage score of 93% and a quality score of 51%. It is followed closely by insurance, which has the same quality score and a coverage score of 90%. In fact, insurance recorded a 34% increase in quality year-on-year. An even higher percentage improvement in quality – 40% – was achieved by another financial services sector, financial asset owners and managers.

For this year's Barometer, the materials and buildings industry featured as a separate category from real estate (in the 2021 Barometer, both categories were combined). This separation has helped to highlight materials and buildings as a strong performer for both disclosure coverage and disclosure quality, with the sector scoring particularly highly in relation to targets and metrics. This suggests the sector is further intensifying its efforts to reduce emissions, helped by initiatives such as the Global Alliance for Buildings and Construction.[30]

Significantly, given its high vulnerability to the effects of climate change, the agriculture, food and forest products sector continues to lag behind most other sectors, in terms of both coverage and quality. It performs particularly poorly on the strategy and risk management elements of the TCFD framework for disclosure quality.

Limiting global warming to 1.5°C is a major challenge for agriculture, food and forest products, since it is likely to require the sector to make far-reaching changes to how it operates. The results of the Barometer suggest that companies in the sector are still wrestling with the sensitive issues of transition plans and the potential impact of climate-related risks and opportunities on their business.

Overall, all sectors that could be compared year-on-year recorded an increase in disclosure coverage in 2022 and the vast majority recorded improved quality. This trend probably reflects how decarbonization is becoming more widely integrated into organizational strategy, rather than being treated as a separate initiative.

Table 1. Sectors with the most significant exposure to transition risk continue to score higher

Sector	Quality 2021	Quality 2022	Coverage 2021	Coverage 2022
Banks	46%	39% ▼	77%	77% ▲
Financial asset owners and managers	25%	35% ▲	48%	72% ▲
Insurance	38%	51% ▲	57%	90% ▲
Other financial institutions*	NA	46%	NA	86%
Agriculture, food and forest products	35%	37% ▲	65%	76% ▲
Energy	48%	51% ▲	78%	93% ▲
Materials and building**	NA	46%	NA	87%
Mining	38%	42% ▲	68%	85% ▲
Real estate**	36%	40% ▲	67%	83% ▲
Transportation	50%	46% ▼	77%	84% ▲
Retail, health and consumer goods	42%	44% ▲	67%	86% ▲
Telecommunications and technology	50%	46% ▼	79%	87% ▲

*Other Financial institutions - new category included this year to include exchanges, other financial service providers, rating agencies and credit bureaus.

**Materials and buildings separated in 2022 from Real estate, buildings and construction in 2021.

[30] "Global Alliance for Buildings and Construction," United Nations Climate Change website, https://unfccc.int/news/global-alliance-for-buildings-and-construction, accessed 26 July 2022.

> By the nature of its business, the financial services sector is heavily exposed to climate risk ... (which) could lead to a sharp fall in asset prices and increased uncertainty ... potentially destabilizing the entire finance system.

Spotlight on financial services

Alexis Gazzo, Climate Change Leader, EY & Associés, and Emma Herd, Climate Change and Sustainability Partner, Ernst & Young, Australia

By the nature of its business, the financial services sector is heavily exposed to climate risk. Any acceleration in global warming, together with the accompanying economic consequences of that, could lead to a sharp fall in asset prices and increased uncertainty, impacting the balance sheets of banks and asset managers, and potentially destabilizing the entire financial system.

Given this context, and the fact that climate reporting is at a relatively mature stage within the banking sector, it is surprising that banks have appeared to have not performed as well as some other sectors in this year's Barometer, in terms of both the quality and the coverage of their disclosures. While this may reflect the change to the sample size, it could also reflect the steps that the banking industry is taking to revise and reset frameworks for climate reporting.

For example, The Glasgow Financial Alliance for Net Zero (GFANZ) has developed a draft Net-zero Transition Plan framework for the financial sector. This framework aims to support financial institutions to demonstrate and stakeholders to judge, the credibility of their plans to accelerate and scale clean energy and transition-related finance to levels consistent with limiting global warming this century to 1.5°C.[31]

The insurance industry has performed strongly in terms of both coverage and quality on this year's Barometer, outperforming most other financial and nonfinancial sectors. This performance is probably linked to the growing momentum within the industry toward a transition to a net-zero emissions economy. The insurance industry is exposed to the risks of economic losses caused by extreme weather events. In 2021, insured losses from natural catastrophes – including flooding in Europe and a tornado in the US – reached around US$120b globally.[32]

Last year, eight insurers and reinsurers established the United Nations-convened Net-Zero Insurance Alliance (NZIA), now part of GFANZ, with the goal of transitioning their insurance and reinsurance underwriting portfolios to net-zero greenhouse gas emissions by 2050.[33] The NZIA, in collaboration with the Partnership for Carbon Accounting Financials, subsequently launched a working group to develop the first global standard to measure and disclose insured greenhouse gas emissions.[34]

Asset management is another financial sector that has improved considerably year-on-year, in terms of both the quality and the coverage of its disclosures. As they sit at the top of the investment chain, large asset owners and asset managers have long been pushing companies to produce more reporting on climate risk. Now, they appear to have recognized that they can set a positive example to the organizations they invest in. Providing better climate-related financial disclosures is an opportunity for them to "walk the talk," when it comes to driving up the quality of climate reporting.

Financing the transition to a sustainable future

In 2018, Citi became the first US bank to publicly report on its efforts to implement the TCFD recommendations. It has also made climate risk a central pillar of its 2025 Sustainable Progress Strategy.

As part of this strategy, Citi is working to further integrate climate risk into its risk policies and governance frameworks, and analyze and measure the impacts of its portfolios. Furthermore, the bank is engaging clients in their own climate risk management and low-carbon transition strategies.[34]

In 2021, Citi announced that it would be committing US$1t to sustainable finance by 2030. It plans to finance a wide array of climate solutions, from renewable energy and clean technology through to water conservation and sustainable transportation.[36]

[31] "GFANZ Releases Guidance on Credible Net-zero Transition Plans and Seeks Public Input to Accelerate Action," Glasgow Financial Alliance for Net Zero website, www.gfanzero.com/press/gfanz-releases-guidance-on-credible-net-zero-transition-plans-and-seeks-public-input-to-accelerate-action, accessed 20 July 2022.

[32] "Natural disasters cost insurers $120 billion in 2021, Munich Re says," Reuters website, www.reuters.com/markets/commodities/natural-disasters-cost-insurers-120-billion-2021-munich-re-says-2022-01-10, accessed 23 July 2022.

[33] "Global insurance and reinsurance leaders establish alliance to accelerate transition to net-zero emissions economy," United Nations Environment programme website, www.unep.org/news-and-stories/press-release/global-insurance-and-reinsurance-leaders-establish-alliance, accessed 23 July 2022.

[34] "Partnership for Carbon Accounting Financials Collaborates with UN-convened net-zero insurance alliance to develop standard to measure insured emissions," United Nations Environment programme website, www.unepfi.org/news/industries/insurance/partnership-for-carbon-accounting-financials-collaborates-with-un-convened-net-zero-insurance-alliance-to-develop-standard-to-measure-insured-emissions/, accessed 23 July 2022.

[35] Finance for a Climate-Resilient Future II, Citi, 2020.

[36] "Citi Commits $1 Trillion to Sustainable Finance by 2030," Citigroup website, https://blog.citigroup.com/2021/04/citi-commits-1-trillion-to-sustainable-finance-by-2030, accessed 24 July 2022.

Spotlight on energy

Matt Handford, Climate Change and Sustainability Principal, Ernst & Young LLP, United States

Energy production accounts for almost three quarters of all anthropogenic emissions. The energy sector should, therefore, be viewed as an important low-carbon transition platform, aligning to the expectations of investors and regulators, as well as those of the markets more broadly.

It is not surprising, then, that energy is ahead of other sectors on the Barometer, when it comes to disclosure quality and coverage, as well as decarbonization strategy. EU-based oil and gas companies have increasingly focused on portfolio diversification while more broadly, oil and gas producers are disclosing more ambitious emissions reduction targets, typically focused on their own operations. Their investors are demanding that they do even more, however. For example, they are calling on management teams to better articulate short-, medium- and long-term reduction targets and expand coverage metrics to include Scope 3 emissions.

The industry is activating across the value chain. For example, the Oil and Gas Climate Initiative (OGCI) is a CEO-led initiative that accounts for almost 30% of global operated oil and gas production. It aims to accelerate the oil and gas sector's response to climate change and explicitly supports the Paris Agreement. Drawing on its collective strength, it hopes to achieve net-zero emissions as early as possible.[37]

Recognizing the fundamental shifts in energy production that are required in a below 1.5°C future, scenario analysis is vital to help energy companies plan for the significant structural changes that are likely to accompany the transition to a low-carbon economy. For the global economy to support the Paris Agreement goal, emissions related to the consumption of fossil fuels should decrease rapidly through technological advances (such as carbon capture and sequestration and green hydrogen production), and increased uptake and deployment of low-carbon alternatives (such as renewable energy production). This shift will likely require energy systems to decarbonize, transport systems to electrify and public transport to be powered by low- or zero-carbon sources.

Geopolitical circumstances can impact short-term supply and demand of fossil fuels that may be at odds with longer-term transition scenarios. There is likely to be a continuing tension for the industry, as it navigates these near-term cycles at the same time as demonstrating an enabling effect for the energy transition.

Business transformation toward a net-zero target

UK energy company Shell set a target to become a net-zero emissions energy business by 2050. To help set the pace of change, Shell has also announced a target of halving its Scope 1 and Scope 2 absolute emissions by 2030, compared with 2016. Shell is transforming its business to meet its objectives, providing more low-carbon energy, such as charging for electric vehicles, hydrogen, and electricity generated by solar and wind power.[38] It has also published the "Sky scenario," which outlines what it believes is a technologically, industrially and economically possible route forward, which they believe would be consistent with limiting the global average temperature rise to well below 2°C from pre-industrial levels.[39]

Oil and gas producers are disclosing more ambitious emissions reduction targets, typically focused on their own operations. Their investors are demanding that they do even more, however.

[37] "A catalyst for change," Oil and Gas Climate Initiative website, https://www.ogci.com/about-us, accessed 24 July 2022.

[38] Our climate target," Shell website, www.shell.com/energy-and-innovation/the-energy-future/our-climate-target.html, accessed 24 July 2022.

[39] "Sky scenario," Shell website, www.shell.com/energy-and-innovation/the-energy-future/scenarios/shell-scenario-sky.html, accessed 28 July 2022.

4 Risks and opportunities

Nearly half (49%) of companies featured on this year's Barometer had conducted scenario analysis, compared with 41% in the previous year.

The TCFD believes that companies should use scenario analysis to assess the strategic and financial implications of potential climate-related risks and opportunities, disclosing these in financial statements where appropriate.[40] It highlights two principal forms of risk:

- **Transition risks:** The risks faced by companies, particularly resource-intensive organizations, from policy action, technology or market changes aimed to accelerate the transition to a net-zero economy. A key transition risk scenario is the so-called 2°C scenario, which sets out an emissions trajectory consistent with holding the increase in the global average temperature to 2°C above pre-industrial levels.
- **Physical risks:** The practical and operational risks posed to companies and their value chains by climate events and acute climate change. For example, these risks may pertain to fixed assets, operations in climate-sensitive locations and water availability.

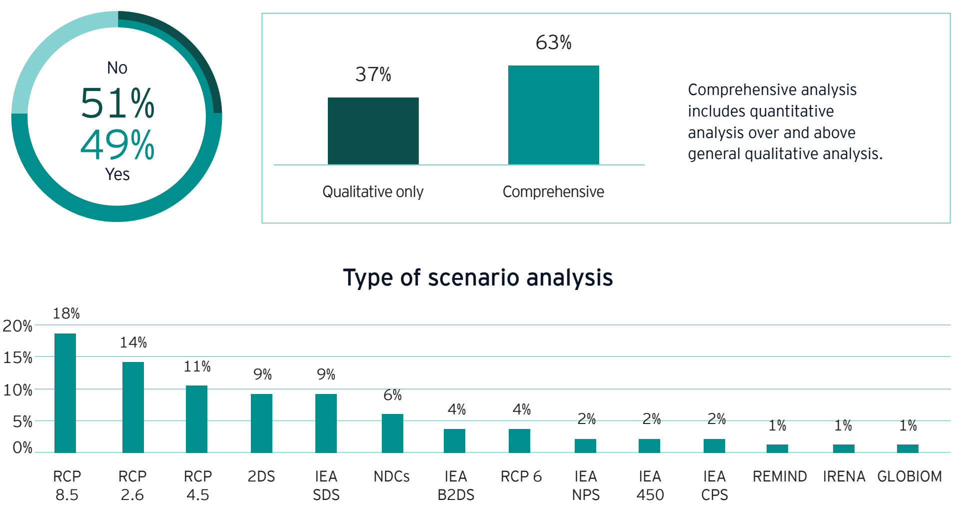
In general, companies' approach to scenario analysis is becoming more mature, partly because they are able to access reference scenarios to use as a starting point, such as those developed by the Network for Greening the Financial System.[41]

Nearly half (49%) of companies featured on this year's Barometer had conducted scenario analysis, compared with 41% in the previous year. Representative concentration pathway (RCP) scenarios represent different measures of atmospheric greenhouse gas concentration trajectories for the long-term future, with the lowest scenario, RCP 1.9, being the pathway that would limit global warming to below 1.5°C, the aspirational goal of the Paris Agreement.

The most commonly referenced scenarios in the Barometer were RCP 8.5 (a high-emissions future, delivering a temperature increase of about 4.3°C by 2100) and RCP 2.6 (a lower risk future, where the global temperature rise is below 2°C by 2100). The results reflect companies planning for what they see as the effective worst-case and best-case scenarios in practice.

The most common time horizons referenced were 2040-50, while 2027 also featured prominently for carbon pricing scenarios.

Figure 6. Did the company mention they conducted scenario analysis? If yes, what was the type of scenario analysis?



[40] Recommendations of the Task Force on Climate-related Financial Disclosures, Task Force on Climate-Related Financial Disclosures, June 2017.

[41] "The future is uncertain," NGFS website, www.ngfs.net/ngfs-scenarios-portal, accessed 23 July 2022.

The most commonly referenced risks in this year's Barometer were acute physical, chronic physical, market, emerging and regulatory risks.

Three-quarters (75%) of the companies featured in this year's Barometer said that they performed risk analysis. Nevertheless, a quarter did not, perhaps because they did not see the usefulness of it or they struggled to make sense of the climate-related data made available to them. Alternatively, it may be the case that they did the modeling but chose not to disclose the outcomes.

Last year's Barometer found that those companies that performed risk analysis were more heavily focused on physical risk (55%), compared with transition risk (25%). In contrast, this year's research found that both risk types attracted nearly equal focus.

This shift is probably a reflection of companies undertaking more in-depth scenario analysis to understand both the operational risks of climate change, as well as a reflection of the TCFD recommendation that companies complete scenarios to at least a 2 degree future. The most commonly referenced risks in this year's Barometer were acute physical, chronic physical, market, emerging and regulatory risks.

Nearly two-thirds (62%) of companies that featured in this year's Barometer performed opportunity analysis. "Products and services" was the most commonly listed opportunity, in line with last year's Barometer.

Whilst for many companies their direct emissions may be a proxy for the degree of risk they face from the climate transition, in many other cases there is a disconnect between scope 1 and 2 GHG emissions and their exposure. For example, many organisations in the fossil fuel value chain themselves have relatively low emissions. Also, the future prospects of companies could inevitably hinge on how different components of their overall value chain are affected by the transition. Hence, companies should consider the risks and opportunities posed by their entire value chain as part of their scenario analysis.

Figure 7. Both physical and transition risks attracted nearly equal focus

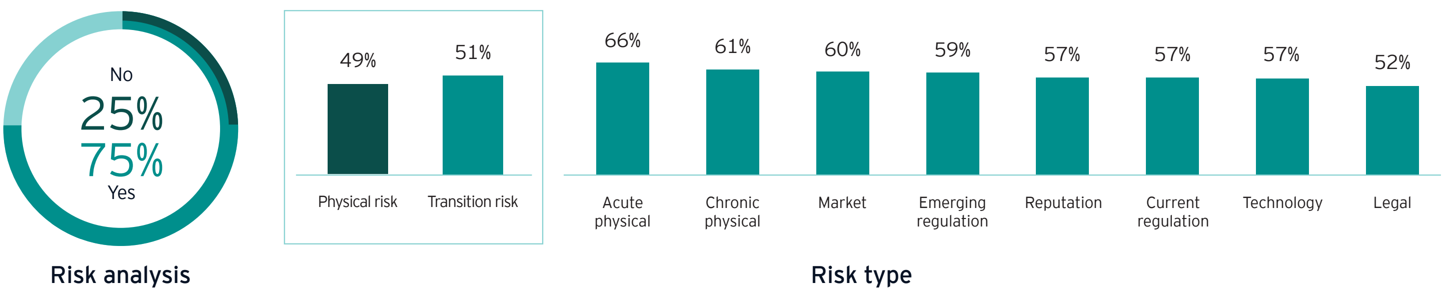
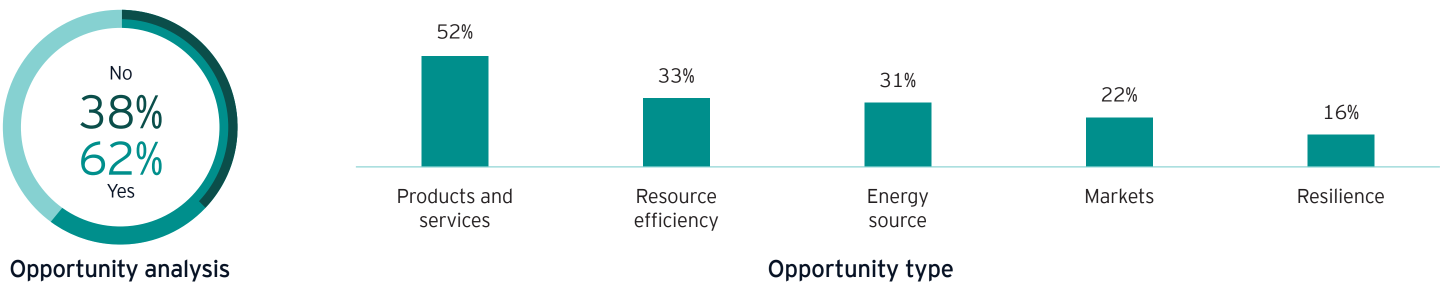


Figure 8. "Products and services" was the most common listed opportunity



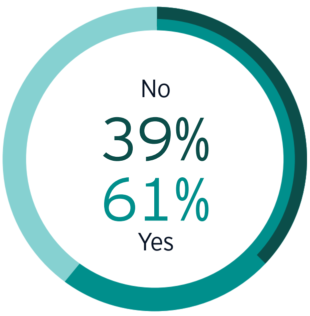
Decarbonization strategy

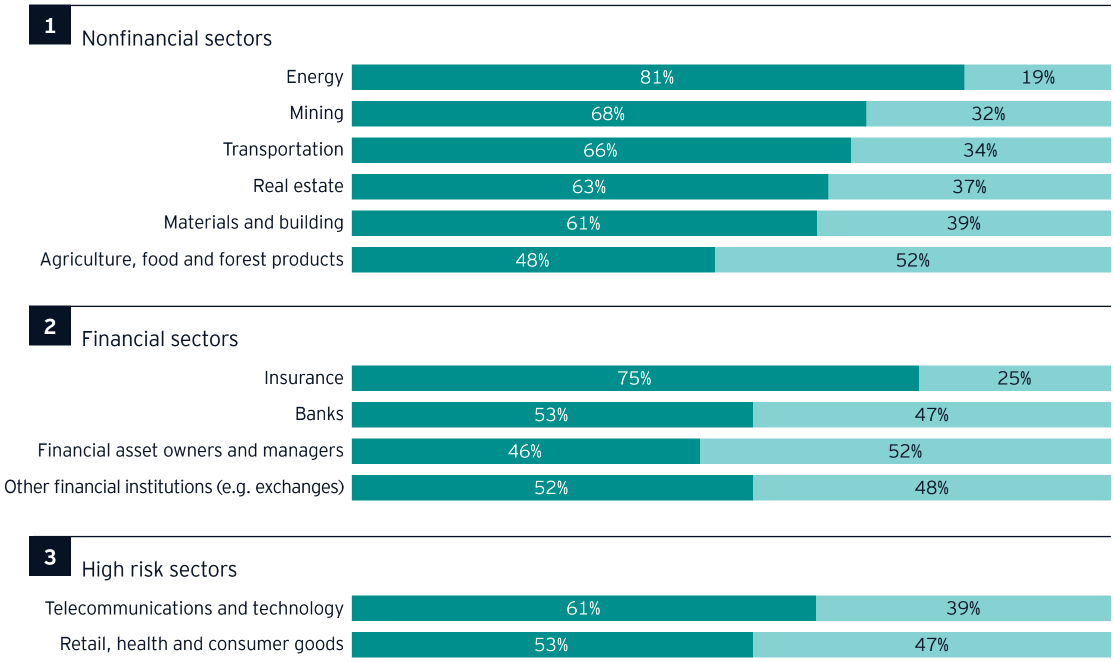
Unsurprisingly, the energy sector – which is set to play a pivotal role in the transition to a low-carbon economy – leads the Barometer, when it comes to disclosing decarbonization strategy. More than four-fifths of energy companies (81%) disclosed either a specific net-zero strategy, transition plan or decarbonization strategy. This compares with an average across sectors of 61%.

Notably, the agriculture, food and forest products sector had a very poor rate of disclosure of decarbonization strategy compared with other sectors, reflecting the complexity of the issues it is likely dealing with as part of the decarbonization process. Overall, however, nonfinancial sectors performed significantly better than financial sectors, when it came to disclosing their decarbonization strategies.

While nonfinancial sectors can primarily focus on their own sector alone, financial sectors should understand the shifts taking place across all the sectors and assets they are providing financial capital for, as well as the financial implications of those shifts, to be able to disclose a credible decarbonization strategy.

Figure 9. Does the organization disclose a specific net-zero strategy, transition plan or decarbonization strategy?





Portfolio rebalancing in the mining sector

Australia-based mining company BHP has set a target of 2030 for reducing its operational emissions by at least 30% from the level they were at in 2020.[42] Over a period of years, it has been gradually shifting its business portfolio away from carbon-intensive industries, such as thermal coal mines, toward "future-facing commodities," such as copper and nickel. These commodities are crucial to the technologies that can support decarbonization.

[42] "We have set targets* and a goal for reducing operational greenhouse gas (CHG emissions) Scope 1 and Scope 2 from our operated assets," BHP website, www.bhp.com/sustainability/climate-change, accessed 23 July 2022.

5 Financial impact of disclosures

The Barometer shows that companies are only making limited progress with integrating their climate reporting with their financial statements. This is despite the fact that financial disclosures are a clear priority for the TCFD and are referenced in its name. Overall, fewer than a third (29%) of companies are referencing climate-related matters in their financial statements, as both qualitative and quantitative aspects. What is more, the majority (54%) of references are qualitative rather than quantitative in nature. These findings suggest that, while companies are improving the coverage and quality of disclosures, they are struggling to bring the information together in a financially material and meaningful way.

A reason for this could be that the finance teams of companies do not have the knowledge to understand where climate risks sit in the context of the financial statements and how material those climate risks are. A further challenge is that financial statements refer to a comparatively short time horizon, whereas climate risk is relevant to a much longer timeframe. This mismatch makes it difficult for companies to properly assess the impact of climate risk in their statements. Furthermore, the uncertainty involved with climate scenarios, and the range of possible outcomes, present challenges, when it comes to including these scenarios in financial models.

To overcome these problems, there is a need to address methodology gaps and provide additional education and training for company finance teams, as well as auditors. It is also important to promote deeper intra-company integration among finance, sustainability and risk management functions.

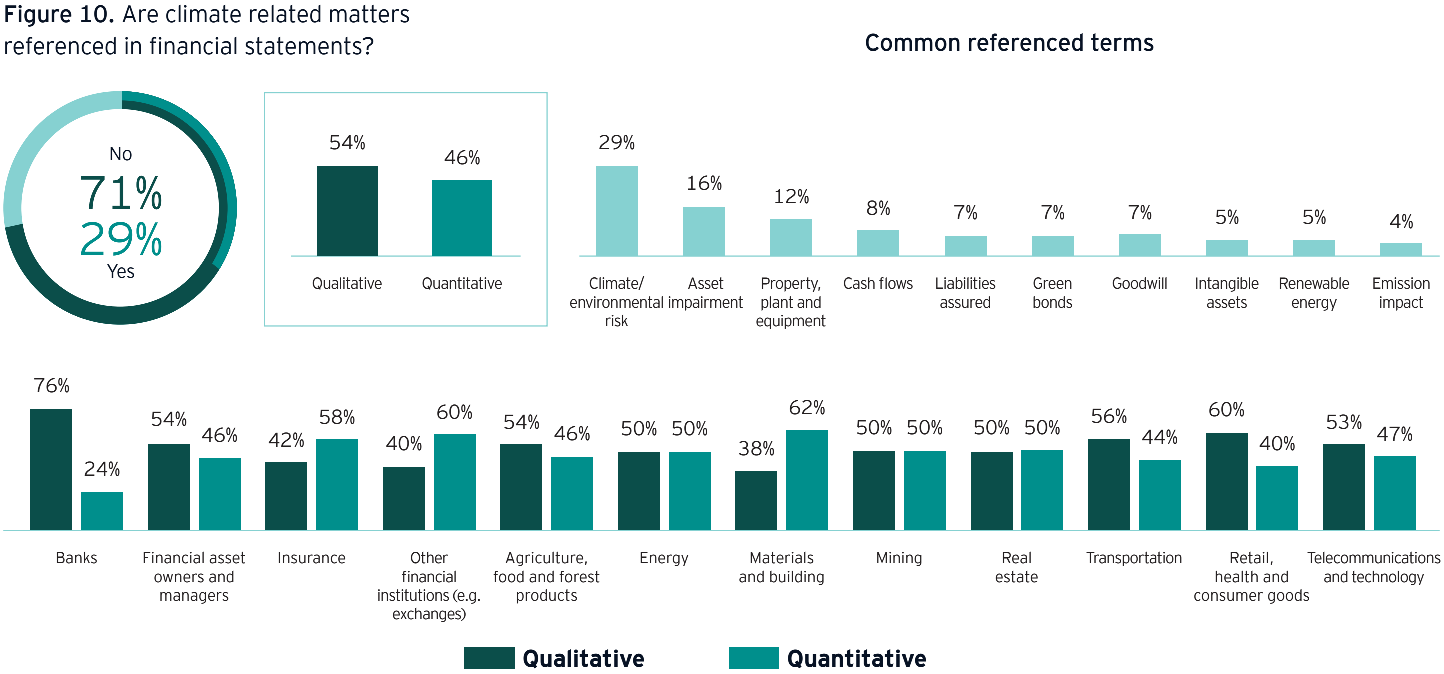
When a company cites a climate-related matter in a financial statement, it makes a provision that it will account for possible future impacts. Climate or environmental risk was the most commonly referenced term in the financial statements, cited by 29% of companies. Asset impairment was the second most commonly referenced term, cited by 16%, while property, plant and equipment came third, cited by 12%.

Future versions of the Barometer should show a steady increase in the percentage of companies referencing financial impact in their statements.

The Barometer highlighted some strong sectoral differences in relation to the referencing of climate-related matter in the financial statements. The strongest-performing sectors were materials and buildings, financial institutions (including exchanges and rating agencies) and insurance. These sectors performed comparatively highly for quantitative disclosure.

In contrast, banks scored poorly for quantitative disclosure – despite their exposure to the risk of sudden falls in asset prices due to climate change. This is because of the challenges banks face with calculating their exposure to carbon-intensive assets, both now and going forward. The quantitative disclosure of the retail, health and consumer goods sector also lagged behind other sectors.

Figure 10. Are climate related matters referenced in financial statements?



US$125t

in investment required by 2050 to achieve net zero.[43]

The investor perspective

Investors around the world are playing a crucial role in driving up the quality of reporting on climate-related risks. This is due to their strong requirement for robust information that will allow them to accurately price risk. Not only have they been challenging management teams on climate issues at annual meetings, but they have also been engaging with policymakers and regulators, advocating for better disclosure regimes.

Investors are conscious that the transition to a lower-carbon economy may undermine the business models of companies that engage in certain activities, or even result in them ceasing to be viable altogether. This, in turn, would impact on investment returns. Furthermore, the risk profile of companies may change significantly as they are exposed to more extreme weather events, such as flooding and heat waves, as well as policy developments relating to regulation and tax.

Climate risk disclosures support investors to identify those companies that are most at risk from climate change, to assess what actions they are taking, and to compare and contrast companies' strategies for mitigating climate-related risk. When allocating capital, investors are increasingly relying on climate risk disclosures, as well as other sustainability-related disclosures, to inform their decision-making. In fact, nearly three-quarters (72%) of investors surveyed for the 2020 EY Climate Change and Sustainability Services (CCaSS) Institutional Investor survey said that they conduct a structured, methodical evaluation of nonfinancial disclosures that relate to the environmental and social aspects of a company's performance.[43]

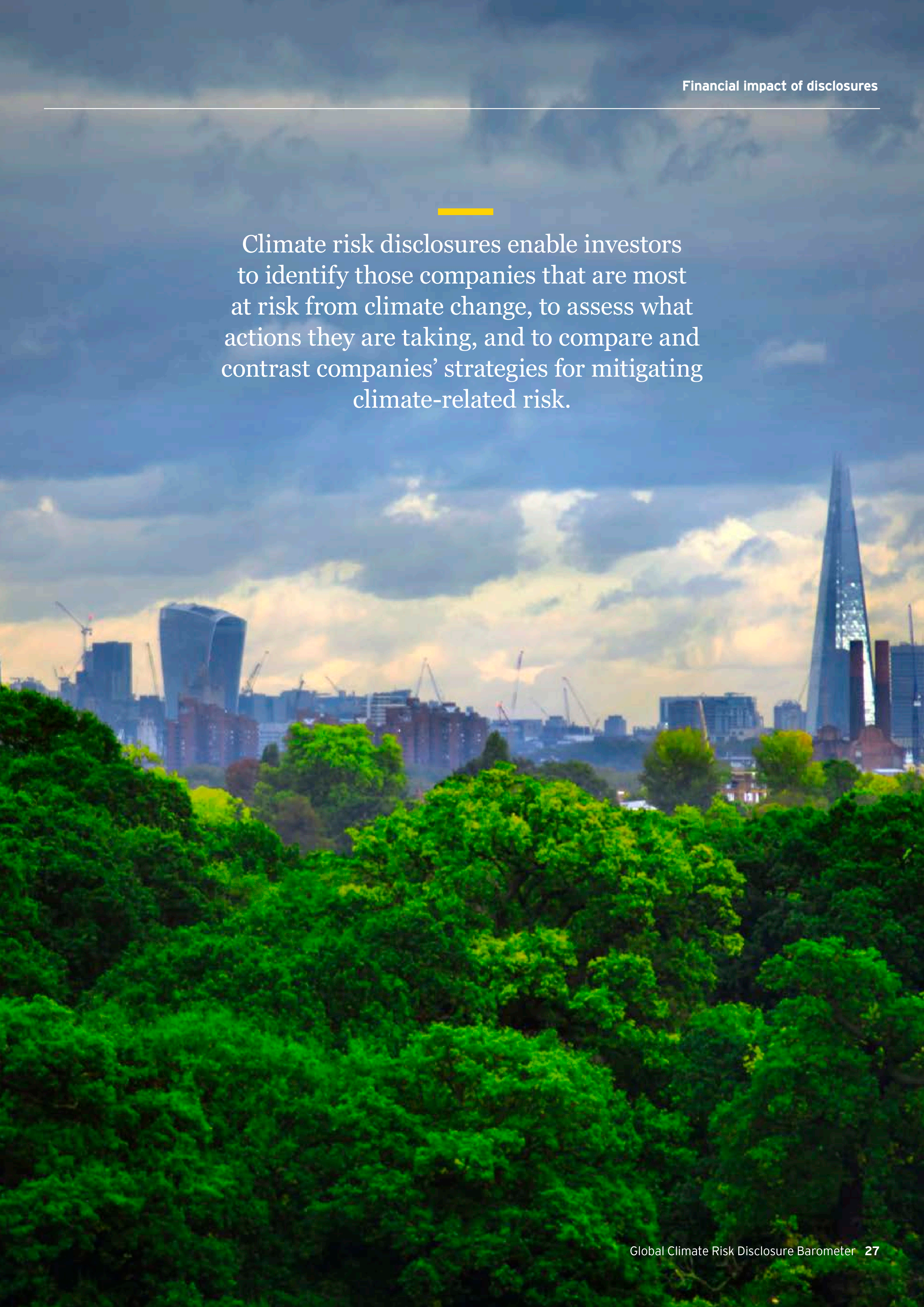
While presenting risks, the transition to a lower-carbon economy also presents considerable opportunities to investors – with US$125t in investment required by 2050 to achieve net zero.[44] Hence, investors are hungry for information from companies that provides them with authentic insights into where the real opportunities lie.

While they seek information to inform capital allocation, investors are also asking some challenging questions about the extent to which they can rely on the ESG information currently being provided and how that information can be more closely connected with financial materiality. Research by EY teams, "The emerging sustainability information ecosystem," has highlighted, for example, that investors focused on financial risk can find that a lack of transparency around the calculation of ESG ratings reduces the decision-usefulness of those ratings.[45]

[43] How will ESG performance shape your future?, EY, 2020.

[44] "What's the cost of net zero?" Climate Champions website, https://climatechampions.unfccc.int/whats-the-cost-of-net-zero-2, accessed 23 July 2022.

[45] The emerging sustainability information ecosystem, EY, 2022.



Climate risk disclosures enable investors to identify those companies that are most at risk from climate change, to assess what actions they are taking, and to compare and contrast companies' strategies for mitigating climate-related risk.

6 Future forecast

The climate reporting landscape is evolving at pace – as the events of the past year have shown – and it looks set to evolve even faster in future. The direction of travel has been made clear, thanks to the combination of high-level policy decisions, regulatory action, the launch of the ISSB, and a number of key jurisdictions around the world moving decisively toward mandatory disclosures on climate-related risks and opportunities for companies.

As a result of these developments, we are beginning to see the emergence of a shared view on climate reporting and disclosures. We are also moving toward a common approach to climate-related disclosures, which is likely to have a transformational impact on the global coverage and quality of reporting over the coming years.

In response to the evolving landscape, companies are looking more closely at how they can integrate reporting on climate issues into their mainstream financial reporting. They are also investing in systems and resource capabilities to improve the quality of their reporting. These investments have the potential to provide returns in the form of improved disclosure quality that should be evident in future Barometers.

As well as assessing their approach to climate reporting, companies are also reassessing their decarbonization strategies. It is becoming increasingly obvious that many companies will likely struggle to meet the ambitious targets they have set themselves unless they start taking radical action soon. Companies are being pressed by investors and regulators to demonstrate that they have a short- or medium-term target that puts them on track to meet 2050 net-zero goals.

According to the International Energy Agency, around US$90b of public money needs to be mobilized globally to complete a portfolio of demonstration projects (projects that promote innovation and disseminate leading practice in relation to carbonization) by 2030. Currently, however, only US$25b is budgeted for that period.[46]

As a result, banks, investors and the debt markets are likely to come under increasing pressure from governments to fund the energy transition. This potentially creates a conflict with their existing strategies to decarbonize their portfolios from a debt perspective. So, the challenge for banks and investors is to find ways to balance their portfolio from a risk perspective, while increasing their investment in those sectors that should urgently decarbonize.

Finally, as policy developments in the EU highlight, the focus of investors, regulators and other stakeholders going forward will likely not just be on the financially material impacts of climate on business. Increasingly, they also want to know what impact a business is having on the climate. As a result, the issue of double materiality will likely continue to rise in prominence.

There can be a huge difference in terms of the level of emissions generated by an organization and how that organization itself is impacted by climate change. For example, a high emissions-intensive business may be less exposed to transition risk than a low emissions-intensive business, if it produces goods that are sought after in a low-carbon world. Growing interest in double materiality could therefore pose challenging questions for businesses to answer – challenges that they can expect to have to answer in their disclosures.

Taskforce on Nature-related Financial Disclosures

The Taskforce on Nature-related Financial Disclosures (TNFD) is a global, market-led initiative that aims to develop a risk management and disclosure framework for organizations to report and act on evolving nature-related risks. Its aim is to support a global shift in capital flows "away from nature-negative outcomes and toward nature-positive outcomes."

Launched in June 2021, the TNFD represents financial institutions and market service providers with US$19.4t in assets.[47] It is due to release its final recommendations for its framework in September 2023.

The TNFD framework is intended to be a foundational framework for reporting on nature, just as the TCFD framework is a foundational framework for reporting on climate. Given that the TCFD framework underpins climate disclosure in markets around the world, it is reasonable to expect that the TNFD framework will do the same for nature.

Companies can draw on the lessons they have learned from TCFD reporting, as they prepare for reporting under the TNFD. Elements, such as governance and strategy, have the potential to be fairly straightforward to integrate into nature reporting, but targets and metrics are likely to be much harder due to the complexity involved with biodiversity-related issues. While CO_2e is a commonly used metric in climate reporting, there is no equivalent for biodiversity.

Nevertheless, the principle behind TNFD reporting is fundamentally the same as the principle behind TCFD reporting. The framework asks companies to consider the risks they face and how these impact on their financial performance over the long term. Also, how are these risks likely to impact their portfolio of business?

To perform TNFD reporting, companies will likely need to collect large amounts of data –from both internal and external sources. They should also be able to manage and make sense of the data, in order to disclose the right information.

[46] Net Zero by 2050, International Energy Agency, 2021.

[47] About the Taskforce on Nature-related Financial Disclosures," TNFD website, https://tnfd.global/about, accessed 23 July 2022.

7 Action for decarbonization

6%

Global energy-related carbon dioxide emissions rose by 6% in 2021 to 36.3 billion tonnes, their highest-ever level, according to the International Energy Agency.

The transition to a lower-carbon economy is the largest economic transition that we could see globally within our lifetimes. It will likely require the complete decoupling of economic growth from greenhouse gas emissions, as well as far-reaching corporate transformation.

The world will only be able to achieve the Paris Agreement target of a 1.5°C rise in temperature above pre-industrial levels through a rapid reduction in global emissions and the comprehensive decarbonization of the global economy. Yet, in practice, there is no sign that this is actually taking place.

Global energy-related carbon dioxide emissions rose by 6% in 2021 to 36.3 billion tonnes, their highest-ever level, according to the International Energy Agency.[48] Meanwhile, a new study led by the UK Met Office has predicted that global temperatures will continue to rise, with there being a 50:50 chance that one of the years between 2022 and 2026 will exceed 1.5°C above pre-industrial levels, moving us closer to a scenario, where 1.5°C is exceeded for extended periods.[49]

Left unchecked, rising temperatures could inevitably have negative impacts on companies, in terms of both physical and transition risks. Meanwhile, it is clear that there is a major disconnect between the disclosures that companies are making under the TCFD framework and their real-life decarbonization journeys, as they pertain to their operations and supply chains. If companies – and countries – are to stand any chance of meeting their 2050 targets, let alone their 2030 targets, major progress should be made over the next 12 months.

So, what can your own organization do to accelerate both its own decarbonization journey and the decarbonization of the global economy, drawing on climate risk disclosure as a robust basis for corporate transformation?

[48] "Global CO2 emissions rebounded to their highest level in history in 2021," IEA website, www.iea.org/news/global-co2-emissions-rebounded-to-their-highest-level-in-history-in-2021, accessed 24 July 2022.

[49] "Temporary breaching of 1.5C in the next five years?" Met Office website, www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/decadal-forecast-2022, accessed 24 July 2022.

> If we are to accelerate progress, we need companies to be more transparent about the process they're following to achieve their emissions targets, the investments they're making, and what they're doing in the event they miss those targets.

1. Treat disclosure as a means to an end, rather than an end itself:

Ultimately, decarbonization is the result of the real-world actions that companies take, not the information they disclose in their reports. Nevertheless, companies can use their disclosures as a means of holding themselves to account for how they reduce their carbon footprint, while creating value for their stakeholders over the long term.

2. Set meaningful targets:

Many companies with complex value chains generate the majority of their emissions indirectly, through these value chains. What is more, they may set ambitious reductions targets without fully understanding their current baseline. Does your own organization have a genuine appreciation of its own capability to decarbonize not only its own operations, but its supply chain as well? If not, how can it develop this appreciation? Also, how is your organization allocating capital investment to bring about the transition to a low-carbon economy? Is it making use of marginal abatement cost curves and optimizing strategy to increase its chances of reaching a net zero target?

If we are to accelerate progress, companies should be more transparent about the process they're following to achieve their emissions targets, the investments they're making, and what they're doing in the event they miss those targets.

Targets should be looked at on a holistic basis, taking into consideration entire value chains, as well as different climate-related scenarios, including a 2°C or lower scenario. Science-Based Targets are available to all sectors apart from oil and gas. While they have their limitations, Science-Based Targets can offer a useful pathway to companies looking to reduce their greenhouse gas emissions.

3. Assess strategy:

Not only should climate strategy be disclosed, but it should also be comprehensively assessed on an ongoing basis. Does your company continually ask itself whether its strategy is comprehensive and credible, whether it covers the most important issues and whether it is aligned with the targets of the Paris Agreement? Does it perform scenario analysis to understand all the risks and opportunities associated with a change in strategy? And does it have a capital allocation plan to provide confidence that investment is channeled toward the right projects? Finally, of course, it is crucial to implement the strategy using a detailed execution plan.

4. Perform scenario analysis:

Assessing the impact of different future scenarios should be fundamental to your organization's future strategy. Use scenario planning to stress-test your current strategy in light of different potential eventualities and understand which scenarios could lead to your business becoming unprofitable. The scenario analysis should highlight opportunities to adjust business strategy and boost resilience. When assessing the likelihood of different scenarios, it's important to stay close to the science and the policy environment to understand the latest climate-related trends.

5. Explore the opportunity:

Companies can often be concerned about discussing opportunities in their disclosures for fear it looks like they are exploiting the threat of climate change. The reality is that transformation creates opportunities, however. As your organization channels greater investment into climate solutions, it has a chance to make some big strategic decisions, which may include transforming its whole portfolio of business, while reducing its emissions footprint. As discussed, performing scenario analysis may help your organization to fully understand the available opportunities and look at the targets that have been disclosed by its banks as a means of identifying suitable finance options.

6. Collaborate to succeed:

Collaboration — including both public-private and company-to-company collaboration — is vital to achieving on the ambitious decarbonization targets set by both governments and organizations. Is your organization working with other organizations, as well as national authorities, to innovate, ensuring that finance is directed to the projects most likely to drive change? Are you helping to provide confidence that your reporting capabilities inform policy and decision-making, at both an organizational and a national level? Progress depends on businesses managing climate risk that is outside of their own organizational and operational control. As such, your organization should be collaborating with the other members of its value chain to develop new and innovative solutions that reduce emissions and accelerate decarbonization.

7. Track performance in real time:

Investors and banks will be paying increasing attention to how companies perform against their environmental targets, as those targets draw nearer. As a result, companies that miss the targets they have set themselves can expect to see an impact on their valuations. Your organization can prepare for greater scrutiny from investors by embedding real-time tracking of climate performance into its organizational risk management practices and operations.

The role of reporting in decarbonization

Here are three ways in which your organization can use corporate reporting to support its decarbonization strategy:

1. **Prioritize materiality:** Decarbonization is a big, complex and challenging process. With so many elements to consider, companies can get so caught up in the detail that they can lose sight of the big picture. Reporting can be a useful way to focus on what matters. Rather than trying to report on every standard and metric, is your organization concentrating on materiality? It should be telling a sharp, focused and integrated story about the financial risks and opportunities that climate change presents to its business.

2. **Benchmark disclosures against peers:** Companies may consider looking at what their customers, competitors and suppliers are disclosing as their greatest challenges. What is the carbon intensity of their emissions? How are they responding to the opportunities and risks presented by climate change in terms of the products and solutions they develop? By studying the disclosures of others, your organization can find ways to enhance its own strategy, better understand the financial impact of climate change, and more effectively communicate its performance.

3. **Prepare for the implementation of the ISSB's new standards:** The process of reporting on climate and other sustainability-related matters is set to be transformed by the ISSB's global baseline of sustainability disclosures. The new standards will help to bring greater comparability and transparency to the reporting process, helping to highlight companies that may be engaged in greenwashing or making insufficient progress against their targets. Therefore, companies should provide confidence they have the appropriate processes and governance in place to respond to the higher levels of scrutiny that will accompany global adoption of the standards.

About this research

The 2022 Barometer analyses the extent to which companies have applied the TCFD framework to more effectively disclose climate-related risks and opportunities through their reporting processes.

The EY Global Climate Risk Disclosure Barometer provides an annual overview of the alignment of organizations' climate-related risk disclosures with the recommendations across sectors likely to be highly impacted worldwide.

This assessment provides not only companies, but also external stakeholders of all types, such as national regulators, financial institutions and investors, with an understanding of the current state of global climate risk reporting. The first edition of the Barometer was issued in December 2018.

The 2022 Barometer analyses the extent to which companies have applied the TCFD framework to more effectively disclose climate-related risks and opportunities through their reporting processes. It draws on public disclosures produced during the 2021 calendar year by companies in both the financial and nonfinancial sectors, including companies that are at high risk of climate-related impact. These disclosures were typically made in annual sustainability reports and CDP reports.

The disclosures of more than 1,500 companies (the largest by market capitalization) across 47 jurisdictions were included in the assessment, broadening the size and geographical scope from 2021, when the research was based on more than 1,100 companies across 42 jurisdictions. In addition, the scoring matrix for the Barometer has been evolved and refined since last year to become even more detailed and robust. Because of these changes, it was not possible to include a meaningful in-depth year-on-year analysis.

4th edition

Examines disclosures from over

1,504 companies

(majority of listed companies)

13 exposed sectors in 47 countries*

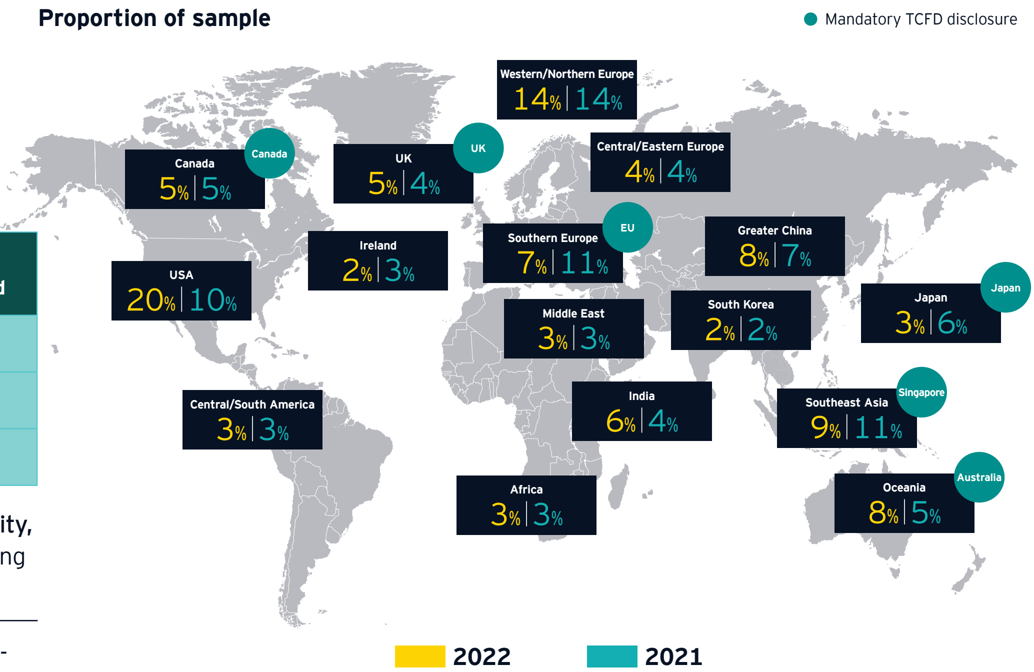
Selected sectors	Number of companies reviewed
Financial	370
Nonfinancial	1,135
Total	1,504

Disclosures made in **annual, sustainability, CDP reports** and **other reports** publishing within the **2021 calendar year.**

Companies were scored through a multi-tiered system including both the **coverage** and **quality** of the TCFD recommendations.

*Russia is excluded from CRB 2022

Proportion of sample



Increase/decrease in the companies pertains to language constraints/country POC's inputs and selection of companies by Market Cap, revenue and no of employees

In addition to the annual snapshot of organizations' uptake of the recommendations, this year's Barometer explores:

- The quality of climate-related disclosures across markets and sectors
- Comparisons of disclosures between companies that do and do not disclose through CDP
- The extent to which companies use scenario analysis and whether that analysis is qualitative or quantitative
- Whether companies use risk and opportunity analysis
- Decarbonization strategy analysis
- Referencing of climate-related matters in the financial statements

Scoring

Companies were scored on two different metrics: the coverage and quality of disclosures.

Coverage

Companies were assigned a score (in percentage) on the basis of the number of TCFD recommendations addressed by them. A score of 100% indicated that the company had disclosed some level of information compliant to each of the recommendations, regardless of the quality of information provided.

Quality

Companies were given a rating (out of five) based on the quality of the disclosure, expressed as a percentage of the maximum score, should the company implement all 11 recommendations. A score of 100% indicates that the company had adopted all the recommendations and the quality of the disclosure met all the requirements of the TCFD (i.e., gaining a maximum score of 5 for each of the 11 recommendations).[50]

The quality of the disclosures was scored using the following scoring system:[51]

0 – Not publicly disclosed

1 – Limited discussion of the aspect (or only partially discussed)

2 – General discussion or disclosure of the aspect

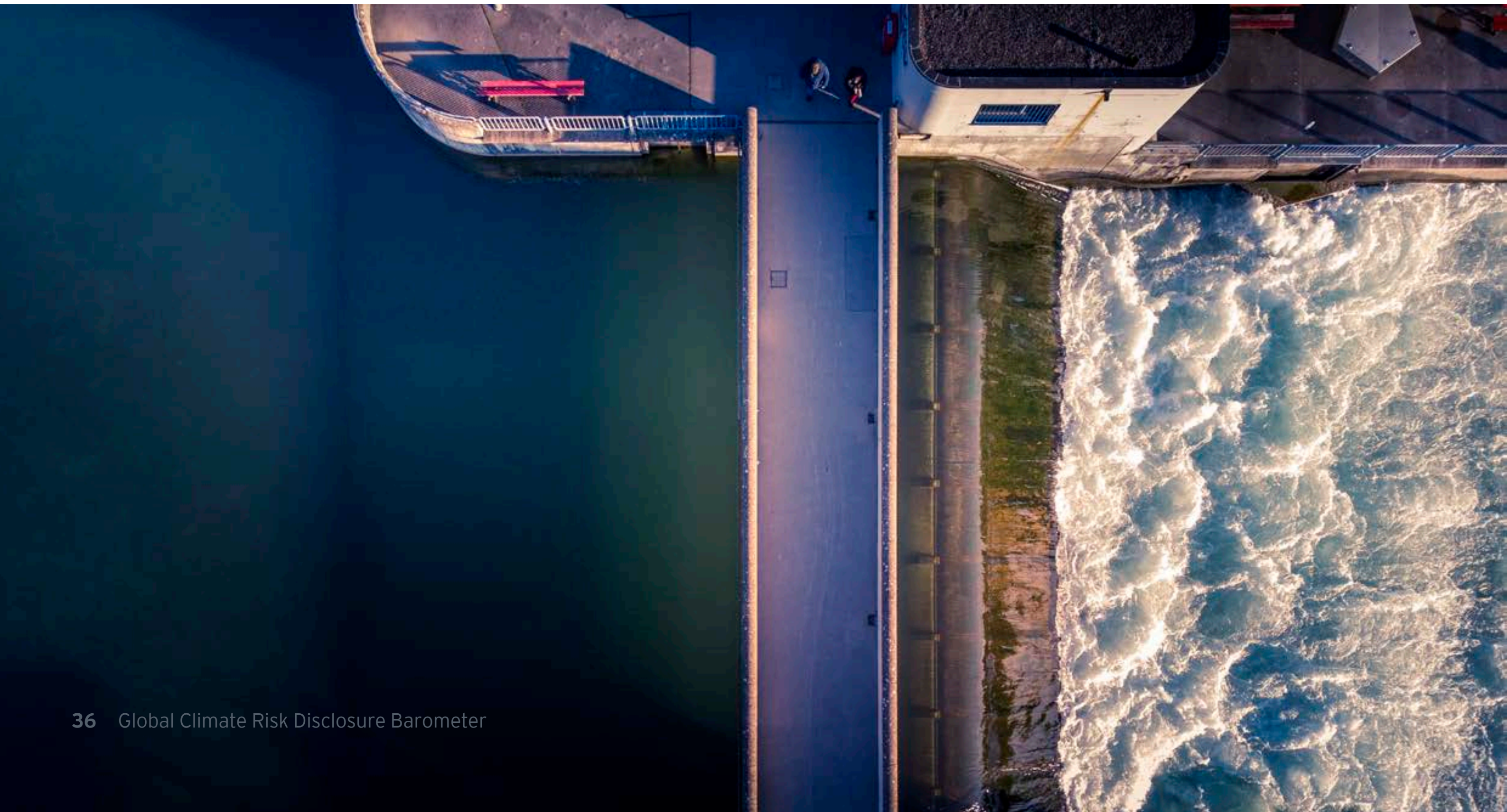
3 – Detailed discussion or disclosure of the aspect

4 – Well-developed disclosure of the aspect

5 – Market-leading disclosure of aspect; addressed all features of aspect in disclosure

[50] Note: The scoring matrix for this analysis was updated to reflect the 2021 revised guidance from the TCFD for metrics, targets and transition plans. These changes are likely to have caused a decline in quality scores due to the stricter guidance.

[51] Note: This scoring matrix was updated to include more granular scores of 0,1,2,3,4 and 5, compared with possible scores of 0, 1, 3 and 5 in previous research. This could have impacted the likelihood of scores achieving a rating of 4 rather than 5.



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EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

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Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

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ED None

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