



How will understanding
climate risk move you
from ambition to action?



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The better the answer.
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Foreword

More than half a decade has passed since the initiation of the EY Global Climate Risk Barometer. In that time, much progress has been achieved by the organizations whose disclosures are analyzed for the report. Nevertheless, much more must be done if we are to move toward the action needed to support rapid decarbonization.

The past 12 months have certainly been interesting. By the time we'd finished assessing the results of the last survey, most organizations were caught up in the fervor of needing to do something about climate change and were making some serious commitments. More than 11,000 companies globally have now made "net zero" or similar commitments.¹ Furthermore, over 6,000 of these companies are either aligned to, or committed to, the science-based targets set by the Science Based Targets initiative (SBTi).² This shows that we're reaching critical mass in terms of targets, at least.

In recent years, we have tended to see companies doing the easier stuff: setting targets, making commitments, and trumpeting new governance structures and ambitions. But there is no escaping the fact that a vanishingly small number of organizations have credible pathways to true decarbonization. Additionally, while there is a high level of compliance with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD),³ we now need greater focus on the financial disclosures aspect of that compliance: companies are still falling short of really grappling with the quantitative impacts of climate risk.⁴

Anecdotally, we are starting to see a lot more focus from organizations on their climate strategy. In far too many cases, however, it remains divorced from corporate strategy. Climate strategy is often devised and managed by sustainability functions, focused largely on emissions reduction, and fails to address the organization's overall contribution to climate change and how it can be mitigated. Neither does it consider the physical impacts of climate change on the organization and its supply chains. There also tends to be a worrying lack of engagement with the question of how business will fare in a rapidly decarbonizing economy.

Unfortunately, there remains a disconnect between ambition and action. On the one hand, we increasingly understand the science behind the emissions pathways, needed out to the mid-century and beyond, to keep us within warming limits. On the other hand, however, we have not achieved consensus around what share of the burden of meeting that trajectory will be borne not just by different sectors, but by individual companies within each of those sectors. The challenge is that, on an individual basis, each organization's disclosures can tell a compelling story of resilience and alignment to a below-2°C trajectory but taken in aggregate, the collective efforts will still fall dramatically short of what will be needed.

In hindsight, this year may end up being viewed as a pivotal period in the world's journey toward decarbonizing the economic system. An optimistic view suggests it marks the moment that governments, regulators and businesses got serious and added actions to their words on decarbonization. A less positive view might suggest that 2023 will go down as the year when targets and commitments were exposed as just words with little impact.

But the future is yet to be written. Certainly, progress continues - but it must pick up pace. We must be hopeful. Indeed, we are hopeful that 2023 will prove to be the first year when the global decarbonization ambition finally turns into action.



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¹ Taking Stock of Progress - September 2022, UN High Level Climate Champions, 2022 (accessed via climatechampions.unfccc.int/)

² "Companies Taking Action," Science Based Targets website, <https://sciencebasedtargets.org/companies-taking-action>

³ October 2023 Task Force on Climate-related Financial Disclosures 2023 Status Report, <https://assets.bbhub.io/company/sites/60/2023/09/2023-Status-Report.pdf>

⁴ Reporting Climate-Related Financial Information, <https://www.fsb-tcfd.org/publications>

Executive summary

This year marks the fifth iteration of the EY Climate Risk Barometer. The report is now established as a significant industry benchmark for measuring the progress made in the quality and coverage of climate-related disclosures across the globe. As such, it arrives at a vital moment.

Simply staying up to date with the latest iteration of climate-related standards will no longer be seen as sufficient going forward.

Following a decade of increased regulation around companies' sustainability disclosures, the focus is now on action, and on moving from commitments and targets to measurable results.

The fact is, the urgency to act is increasing. Simply staying up to date with the latest iteration of climate-related standards will no longer be seen as sufficient going forward. Similarly, offering vague long-term ambitions without a clearly articulated plan for how to achieve them will not be enough. The dataset

generated for the purpose of preparing the Climate Risk Barometer gives us the opportunity to identify genuine lasting trends, as well as highlight gaps that must be addressed.

This year's data starkly demonstrates that there are still significant gaps that companies will need to address if we are to achieve our collective ambitions around the climate agenda. It is true that companies have, by and large, transformed their engagement with, and understanding of, the need to decarbonize. Reports

have been commissioned, working-groups created, targets set, and pledges made. Now they must demonstrate their willingness to put into action the commitments they have made.

In light of the need to turn ambition into action, this year's Barometer focuses on three core elements that will shape the reporting landscape for the next few years. This is in addition to providing an analysis of companies' disclosure performance against the TCFD framework.

Three core measures

1 Climate risk reflection in financial statements. We measured the level to which climate-related risk and opportunities are being reflected in companies' financial statements. This measure is revealing in that it reflects companies' genuine understanding of the risks and opportunities associated with climate change, as well as their willingness to articulate and disclose that understanding.

2 ISSB preparedness. The second element of focus is companies' levels of preparedness for the introduction of the first two IFRS Sustainability Disclosure Standards issued by the International Sustainability Standards Board (ISSB). These two standards are applicable from 1 January 2024,^{5,6} depending on jurisdictional adoption. The standards are IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* and IFRS S2 *Climate-related Disclosures*.⁷ In this report, we aim to give a snapshot of how companies are engaging with the new requirements of IFRS S2, and how that is translated into their overall climate strategy. The scores on this measure illustrate both the scope and intensity of companies' climate disclosure.

3 Transition plans. The final key focus area in this year's report looks at what companies are doing to design and implement effective transition plans.⁸ This is a crucial aspect of the next phase of climate-related strategies because the development of a transition plan demonstrates commitment to, and engagement with, the decarbonization agenda. We have carefully interrogated the current state of play to see whether targets and ambitions are being translated into real planning and genuine action. Additionally, we illustrate how the best-in-class are approaching transition plans.

⁵ "New global sustainability reporting requirements are out. Here's what companies need to know", <https://www.weforum.org/agenda/2023/08/issb-global-sustainability-reporting-requirements-explainer>

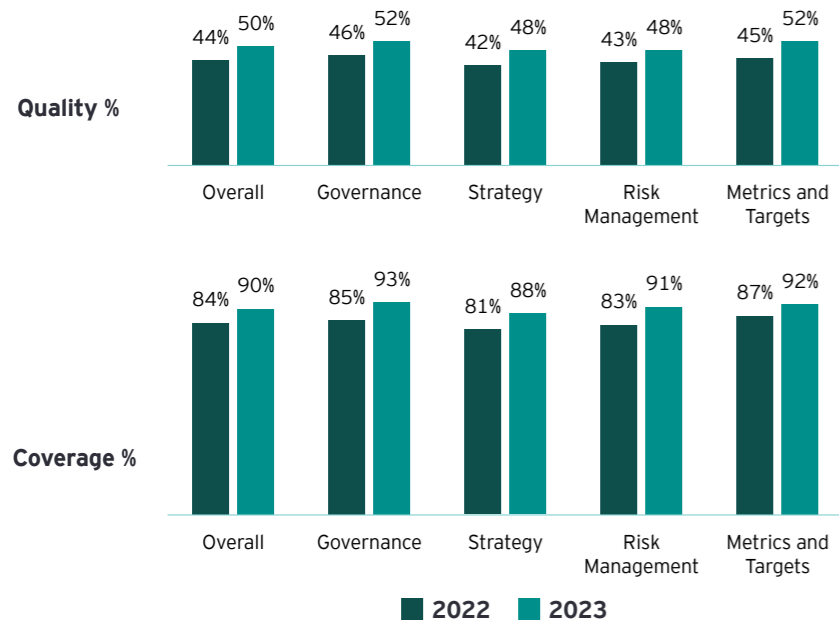
⁶ Transition Implementation Group on IFRS S1 and IFRS S2, <https://www.ifrs.org/groups/tig-ifrs-s1-and-ifrs-s2>

⁷ ISSB issues IFRS S2 new climate-related disclosure standard, https://www.ey.com/en_gl/ifrs/what-you-need-to-know-about-new-issb-standard-ifrs-s2

⁸ "Climate Transition Plans", <https://www.cdp.net/en/guidance/guidance-for-companies/climate-transition-plans>

Key findings

Figure 1.



There is no doubt that expectations are rising. The introduction of ISSB reporting is just one example of how regulators and others are now demanding more from companies.⁹ It is therefore encouraging to report that the quality of disclosures is improving. Our research shows a year-on-year increase in the quality score for climate-related disclosures, up from 44% in 2022 to 50% in 2023. This is proof that companies are investing more time and resources into improving the fundamental quality of what they disclose to stakeholders.

At the same time, coverage has also increased, from 84% in 2022 to 90% in 2023. This is due to companies increasing their focus on the quality of disclosures and alignment with TCFD recommendations.

These are only marginal improvements, however. It is now eight years since the launch of the TCFD, so a quality score of just 50% is concerning. Time is running out¹⁰ for keeping global warming to a below -2°C trajectory. As a result, stakeholders are now expecting companies to embed a genuine, rigorous culture of continuous improvement in relation to climate action.

When the scores are broken down, two contrasting trends emerge. First, there are trends that offer encouragement:

- ▶ All four subcategories that make up the overall quality score have seen significant increases. From governance and strategy, to risk management and metrics and targets, all categories saw an increase in quality.
- ▶ From a governance perspective, a growing number of companies are adopting the increased ISSB and CSRD disclosure requirements, as well as disclosing the skills and competencies required at board level to oversee climate-related strategies.

- ▶ In terms of strategy, companies are moving toward additional disclosure around climate scenarios that include detailed analysis and its inputs, rationale for choosing specific scenario, a time horizon, assumptions and so on. Additionally, companies have started to include value chain emission reduction targets within their overall reduction targets.
- ▶ From a geographic point of view the UK (66%), Germany (62%), France (59%), Spain (59%) and the US (52%) lead the way in terms of the quality of their disclosures. This probably reflects the impact of broad-based climate disclosure guidelines and existing and impending local market reporting obligations.
- ▶ When it comes to metrics and targets, companies are moving toward disclosing their Scope 3 greenhouse gas (GHG) emissions for all the material categories. This indicates that they are improving their understanding of how value chains impact on their climate risks and exposures.¹¹
- ▶ Quantitative financial impact assessment is more commonly seen in a select group of sectors, specifically energy, telecommunications and technology, transportation and other financial institutions (including exchanges, other financial services providers, rating agencies and credit bureaus). While financial asset owners, insurers, real estate companies, banks, and agriculture businesses show good qualitative alignment with climate-related financial impact, they still need to consider improving their quantitative disclosure.

While the improvements are welcome, there remain some pressing concerns. These particularly relate to the granularity

of disclosure and the effectiveness of regulation around disclosures.

- ▶ There is growing insight into the risks companies are most focused on. Last year, companies were equally focused on both forms of climate risk (with 49% focusing on physical risks and 51% on transitional risks). This year brought an increased focus on both risk types, at 73% and 75% respectively. Meanwhile, acute physical, chronic physical, market and reputation risks continue to be commonly referenced risk types.
- ▶ Companies are still less inclined to disclose their strategies on climate-related opportunities¹² than their strategies for climate-related risks. Overall, 77% of those assessed have conducted risk analysis, with the rate of increase on individual risks rising significantly. In contrast, 68% have undertaken opportunity analysis, a slight improvement on 2022. Of those companies that have looked at specific opportunities, products and services continue to be the most common elements listed by organizations, in line with previous years.
- ▶ There are some geographies where the quality of company disclosures significantly lags behind the majority of others since they have a quality score below 40%. India (36%),¹³ China (30%)¹⁴, the Philippines (30%), Indonesia (22%) and the Middle East as a region are all behind other markets.
- ▶ The average score for the quality of governance disclosures has increased from 46% in 2022 to 52%. This is partly due to increasing regulatory pressure and the emergence of IFRS S2 and CSRD ESRS E1 on climate change, which increases the requirement to understand climate impact on a company's operations.

While the upwards shift is a positive development, the figure is still too low. Encouragingly, the coverage score in the governance section has also gone up, from 85% to 93%.

- ▶ More than half (58%) of companies assessed have conducted scenario analysis, an increase on 49% last year.¹⁵ But scenario analysis should be much more widely adopted given the level of insight it provides. As evidence, within the 58% that have conducted scenario analysis there is a greater evaluation of exposure of physical locations to climate hazards, and of the possible impacts of climate-related transition risks. Additionally, there is an uptick in the proportion of group revenue considered under the scope of analysis scenarios.
- ▶ Transition planning remains patchy, with just over half (53%) of companies citing the existence of a relevant strategy to achieve longer-term decarbonization-aligned targets. These include targets that are aligned to time horizons, with certain key actions detailed such as reduction of emissions, development of lower-carbon products and use of alternative fuels. A few companies have disclosed details around the use of carbon offset techniques, or collaboration with relevant stakeholders and partnerships with agencies and bodies for voluntary methane reduction. The energy,¹⁶ transportation and mining sectors have the highest number of organizations with a decarbonization strategy. In contrast, the sectors with the lowest numbers of organizations disclosing a decarbonization strategy are financial asset owners and managers; agriculture, food and forest products; and retail, health and consumer goods.

Top results by market

Table 1. Quality %

Market	2022	2023
UK	62%	66%
Japan	56%	59%
South Korea	54%	58%
Western/Northwestern Europe	51%	58%
Southern Europe	52%	56%
Canada	53%	56%

Table 2. Coverage %

Market	2022	2023
South Korea	96%	100%
Japan	96%	99%
UK	99%	98%
Western/Northwestern Europe	91%	98%
Canada	94%	98%

Top results by sector

Table 3. Quality %

Sector	2022	2023
Energy	51%	55%
Insurance	51%	55%
Materials and Buildings	46%	54%
Other financial Institutions*	46%	54%
¹ Telecommunications and technology	46%	52%

Table 4. Coverage %

Sector	2022	2023
Energy	93%	95%
Materials and Buildings	87%	95%
Insurance	90%	93%
¹ Telecommunications and technology	87%	91%
Other financial Institutions*	86%	84%

* Eg: Exchanges, other financial services providers, rating agencies and credit bureaus

¹ These sectors are not part of TCFD sector classification, however were identified as High Risk sectors by sector leads in 2021 study

⁹ "Ten things to know about the first ISSB Standards", <https://www.ifrs.org/news-and-events/news/2023/06/ten-things-to-know-about-the-first-issb-standards>

¹⁰ "The Need for speed on the Road to Paris", <https://www.ecb.europa.eu/press/blog/date/2023/html/ecb.blog230906-8ab6e40722.en.html>

¹¹ Why carbon emissions reports need handling with care, <https://www.ft.com/content/37ac4900-a0d8-4e82-9850-ba4a5ad3ac6d>

¹² Climate Risks and Opportunities Defined, <https://www.epa.gov/climateleadership/climate-risks-and-opportunities-defined>

¹³ "Decarbonizing India: Driving Climate Action through Disclosure", <https://cdn.cdp.net/cdp-production/cms/reports/documents/000/006/900/original/CDP-India-Annual-Report-2022.pdf?1677751685>

¹⁴ The Global Convergence of Standards for Climate-related Disclosure, https://cdn.cdp.net/cdp-production/cms/reports/documents/000/007/123/original/Chinese_Companies'_2022_CDP_Disclosure_Report.pdf?1690972187

¹⁵ How climate scenario analysis helps firms assess the impact of global warming on their assets, <https://www.scmp.com/business/banking-finance/article/3225152/how-climate-scenario-analysis-helps-firms-assess-impact-global-warming-their-assets>

¹⁶ "IEA Announced Pledges Scenario (APS)", <https://www.iea.org/reports/global-energy-and-climate-model/announced-pledges-scenario-aps>

Market focus

Continuing the trend of last year's Barometer, certain markets are pushing ahead with their climate-related disclosures, while others must work to catch up.

In common with previous iterations of the research, the 2023 Barometer highlights that markets that boast high levels of quality and coverage tend to feature certain common characteristics. These include an effective regulatory landscape, a proactive and engaged investor base pushing for substantial change, and broad political agreement over the fundamental urgency of the decarbonization agenda.

It is therefore not surprising that the UK,¹⁷ Japan,¹⁸ most of Europe,¹⁹ the Americas

and South Korea are the markets leading the way. In these markets, we see the quality score for companies' disclosures hitting more than 50% across the board. These countries can draw on several years of mandatory TCFD disclosures, which have readied companies for the ISSB's²⁰ increased requirements. Indeed, these countries are already showing a strong willingness to adopt ISSB standards. Finally, in those markets with steadily improving quality scores, we are seeing a strengthening of complementary

standards, such as the EU's Corporate Sustainability Reporting Directive (CSRD) and European Sustainability Reporting Standards (SRS).

The level of coverage in these markets also indicates a widespread commitment to TCFD compliance. Coverage levels are mostly in the high 90s. South Korea tops the table with most companies in the scope of the research touching on all 11 TCFD recommendations by providing relevant disclosure in some form.

Figure 2. Quality %

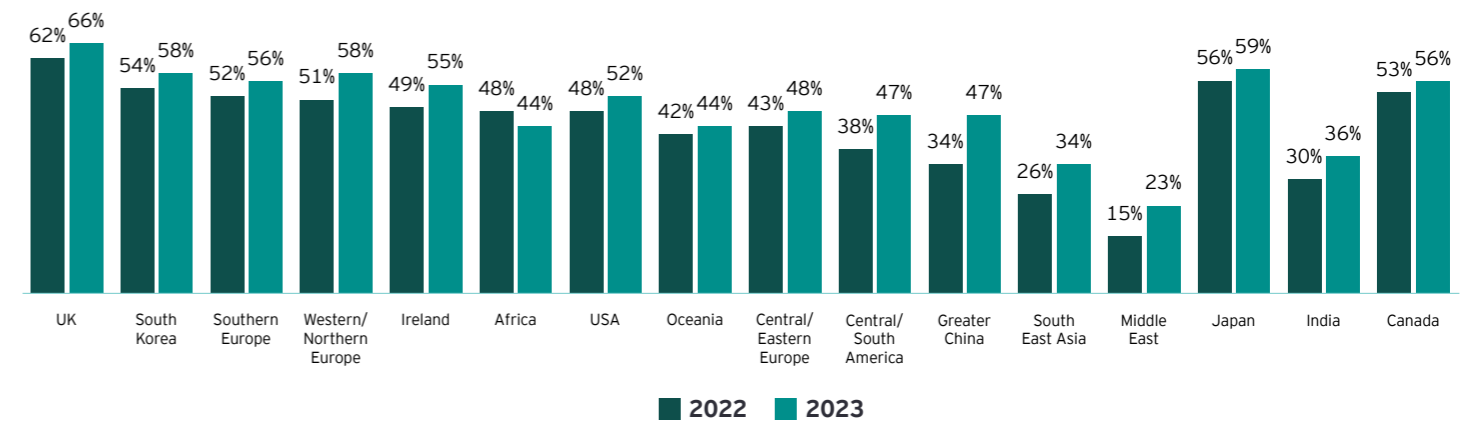
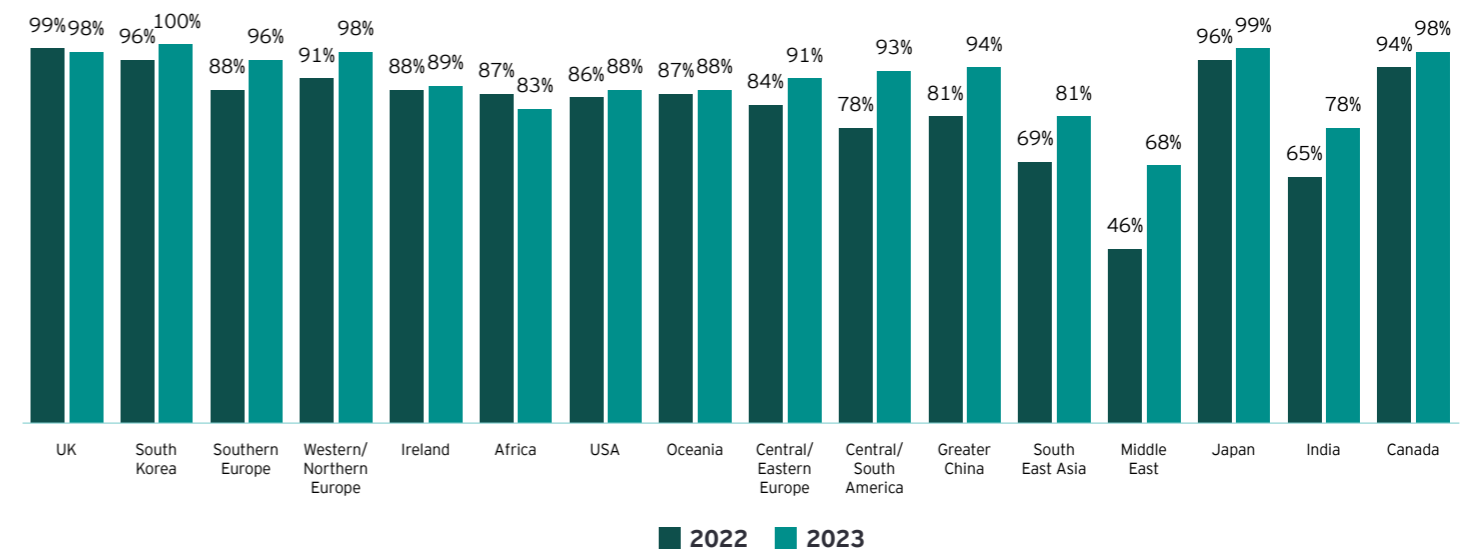


Figure 3. Coverage %



¹⁷ "UK adopts international climate disclosures to bolster global investor appeal", <https://www.reuters.com/world/uk-adopts-international-climate-disclosures-bolster-global-investor-appeal-2023-08-02>

¹⁸ What's next for Japanese sustainability disclosure standards, https://www.ey.com/en_jp/sustainability/whats-next-for-japanese-sustainability-disclosure-standards

¹⁹ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2022.322.01.0015.01.ENG&toc=OJ%3AL%3A2022%3A322%3ATOC

²⁰ EBRD's fourth TCFD report shows progress on mainstreaming climate considerations, <https://www.ebrd.com/news/2023/ebrds-fourth-tcfd-report-shows-progress-on-mainstreaming-climate-considerations.html>



Markets

Work to be done

When it comes to the markets at the lower end of the quality spectrum, the Middle East and Southeast Asia have scope for further improvement.²¹ This is despite their overall increase in performance compared with last year. The key commonality for these markets is the lack of any mandatory climate disclosure requirements. Until this is rectified, these low scores are unlikely to change significantly.

It is notable that overall Greater China saw a marked improvement in its quality score, up from 34% to 47%, a trend that perhaps reflects greater engagement with international markets and the requirement to adhere to regulatory requirements in other jurisdictions. It is likely that the rate of progress will accelerate in China with the implementation of ISSB standards is finalized by the China Securities Regulatory Commission.²²

Finally, while the performance of some emerging economies has improved considerably compared with 2022, Africa saw a slight dip in both quality and coverage. The reason for this could not be identified by our research.

We can take encouragement from some scattered improvements, however. Nigeria's Financial Reporting Council confirmed that it will adopt the ISSB's IFRS Sustainability Disclosure Standards in 2023.²³ Meanwhile, in Malaysia, the issuance of the Application Guide and data catalogue are timely since financial institutions are preparing for mandatory TCFD-aligned climate-related financial risk disclosures in 2024.²⁴

As a result of these developments, momentum will hopefully continue to build and it is encouraging to see that quality levels are rising. Indeed, emerging markets, including Eastern Europe and Southern Europe, have shown significant improvement in terms of both quality and coverage. This trend is mirrored in Central and South America, where the quality of disclosure rose from 38% to 47%, and coverage from 78% to 93%.

²¹ <https://assets.bbhub.io/company/sites/60/2023/09/2023-Status-Report.pdf>

²² "China's ESG policy dash", <https://www.esqinvestor.net/chinas-esg-policy-dash>

²³ Financial Reporting Council of Nigeria to adopt IFRS Sustainability Disclosure Standards, <https://www.ifrs.org/news-and-events/news/2022/11/issb-at-cop27-irc-of-nigeria-to-adopt-ifrs-sustainability-disclosure-standards>

²⁴ What does the new TCFD-aligned guidelines for climate risk disclosure and management mean for Malaysia's businesses? <https://www.eco-business.com/news/what-does-the-new-tcf-aligned-guidelines-for-climate-risk-disclosure-and-management-mean-for-malysias-businesses>

US spotlight



Matt Handford,
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While the EY Global Climate Risk Barometer shows there have been improvements year-on-year, much potential for exploring value creation and risk mitigation remains underutilized in the US. The improvement in quality of disclosures was solid, ticking up from 48% to 52%. Meanwhile, disclosure coverage of US companies' marginally improved, from 86% to 88%.

Understanding the basis for disclosure improvements is a complex question. European regulators have provided significant impetus to EU based companies' risk disclosures through the Green Taxonomy, Corporate Sustainability Reporting Directive (CSRD) and other frameworks, however in the US, the Securities & Exchange Commission (SEC) has been delayed on the introduction of its own Climate Rule, which it hopes will lead to greater standardization.²⁵

Whenever the rule is finalized, progress is expected, in part thanks to capital markets providing the impetus for companies. This pressure from capital markets is driving enhanced scrutiny across sectors on accounting and reporting of greenhouse gas emissions, climate-related strategies, and mitigation and transition pathways. As the Financial Services spotlight points out, the importance of capital markets in driving progress in this area should not be underestimated. Observers will be watching to see whether these twin trends of regulatory and market pressures will combine to encourage more businesses to address the opportunities presented by transition to a low-carbon economy.

Make no mistake, stakeholders are increasingly demanding a more detailed, nuanced set of disclosures from companies. They want to know how these changes in market sentiment, physical environment and climate driven supply chain disruptions really connect to financial performance in the short-, medium- and long-term planning and how they will play into the company's business strategy.

Therefore, in an evolving disclosure landscape, companies will have to answer diverse questions around how to best evaluate complex value chains for previously unforeseen risks and how they plan to unlock new opportunities and leverage capital market appetite for transition related financing. The imminent SEC Climate Rule may form the basis of where these kinds of issues are discussed and disclosed, or it may be that evolving stakeholder needs may require other avenues to disclosure in addition to financial filings.

Whatever the outcome, for a large number of the companies assessed they will need to make sure that their disclosures are aligned to the requirements set out in the Californian climate disclosure bills (SB 253 and SB 261).²⁶ This will require both private and public entities that meet certain criteria and conduct business in California to report on their climate-related financial risks.

A data challenge

In terms of how US companies can continue to drive the quality and coverage of their climate disclosure, data is key. In short, there is a lot to be done. If we contrast how climate-related data is processed and controlled within and across organizations relative to financial data, then the gaps become clear.

Companies must therefore begin to look beyond their own impacts and drill into their value chain to better understand their footprint beyond Scopes 1 and 2. That will require moving beyond estimates and proxy data to real-time, activity data. US companies need to look beyond traditional methods of collecting and analyzing historic data and embrace new tools to improve their performance in this area.

While some in the US have been content to follow along at a steady pace without facing too much scrutiny, that is likely to change in the coming years. Indeed, companies cannot simply reflect an illusion of progress because investors, capital markets and regulators are increasingly holding them to account for the information they report.

Stakeholders are increasingly demanding a more detailed, nuanced set of disclosures from companies.

²⁵ "Climate-Related Disclosures/ESG Investing", <https://www.sec.gov/securities-topics/climate-esg>

²⁶ California leads the way with new climate disclosure bills, <https://www.unpri.org/pri-blog/california-leads-the-way-with-new-climate-disclosure-bills/11850.article>

Europe spotlight



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Europe has consistently led the way on advancing climate disclosure adoption. While it is important to point out the need for further progress, the performance of European companies must also be set against the backdrop of adopting ambitious and far-reaching new legislation.

For the Barometer, we assessed the quality of the disclosure of 1,500 companies, including and excluding those reporting under the Carbon Disclosure Project (CDP) framework. This is a significant distinction. We believe that companies that are already reporting under the CDP and have an SBTi-approved target²⁷ are already aligned to the TCFD in their corporate reporting and should be well positioned to comply with the CSRD on climate change.

The CSRD regulation is unprecedented in terms of coverage with 12 sustainability-related standards, including climate change. The expected disclosures on climate are very ambitious, and there are two examples of disclosure areas that should help to assess the maturity of reporters under the CSRD.

Twin targets

One example is the transition plan. The CSRD requires a company to disclose not only the fact that it has a transition plan and a greenhouse gas emission reduction target, but also the resources allocated to achieving these goals.²⁸

The second example is the anticipated financial impact from climate risk and opportunities. Assessing this is a highly complex process, so companies are allowed a progressive implementation, with three years to disclose the anticipated financial impacts of climate risks and opportunities.

To begin with, they can focus on qualitative disclosures.

To comply with the transition plan target, the regulator requires companies to disclose their targets as well as their resources and intended pathway. The Barometer tells us that, today, roughly 53% of companies provide some form of disclosure on the transition plan. Nevertheless, our assessment indicates that there is a significant lack of detailed action plans, resources, and time horizons.

This is concerning. Companies that have already been approved by the SBTi, and therefore have an ambitious emission reduction target, should already be thinking about how they intend to implement the plan, and at what cost.

Looking ahead, low performance, combined with the regulatory requirement for listed and large companies in Europe to increase disclosure, may now combine to create a significant tension point that their leaders must urgently address.

It is also encouraging to find that physical and transition risk are equally considered by companies. And while all scores are heading in the right direction, Europe is far from being a homogenous bloc. Instead, we are beginning to see distinct groups emerging. For example, while Northern and Southern European companies recorded quality scores of 58% and 56% respectively, Central and Eastern Europe saw its score hit 48%.

Companies are currently performing double materiality analysis to identify which of the sustainability topics will be the most material to their business. This

will then form the foundation of what they will report on an ongoing basis.

With most listed companies having to report in 2025, for the 2024 financial year, the next two years are critical in the journey toward greater disclosure. While 2025 may seem far away, the complexity of the topic demands that companies consider performing the analysis now, to give management time to digest the result and think about how they will disclose.

Companies should not underestimate the task ahead: the next three years are not a luxury. Rather, the time must be used productively to focus on assessment of the task and make sure senior management are ready to act.

Companies should not underestimate the task ahead: the next three years are not a luxury. Rather, the time must be used productively to focus on assessment of the task and make sure senior management are ready to act.

Asia-Pacific spotlight



Arina Kok,
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In Asia-Pacific the analysis shows varying levels of adoption. As a region, Oceania sits very much in the middle of the pack globally in terms of its climate disclosure quality and coverage. Neither a leader nor a laggard, the region has recorded a steady uptick on both measures, edging up from 42% to 44% on quality, and from 87% to 88% on coverage.

Whether those figures reflect growth in the number of companies taking a proactive approach to their climate disclosure is unclear. What we can say, however, is that the next two to three years will give us a clearer picture due to companies moving from TCFD to ISSB.

There are two key aspects to this. Firstly, regulations: by 2025, all large organizations will be focusing on ISSB and TCFD requirements, and in Australia, the Department of the Treasury is proposing to mandate the disclosure of climate-related information by requiring Australian entities to apply a climate-related disclosure standard that is being developed by the Australian Accounting Standards Board (AASB) and which will closely align with IFRS S2.^{29, 30} In Malaysia, we see stricter regulations being driven by the Central Bank, with TCFD disclosure requirements for financial institutions in 2024, for public listed companies in 2025 for the Main Market, and 2026 for the 'Access, Certainty, Efficiency' (ACE) market.

The second is taxonomy and how that develops. This is already happening. For instance, any organization in Singapore that emits more than 2,000 tons of CO₂ must submit an audited report to the

There is little doubt that Oceania will be the scene of real urgency to manage its high-emission sectors that are exposed to developments in international carbon taxonomy.

Monetary Authority of Singapore. That suggests that even before the introduction of the EU's Carbon Border Adjustment Mechanism (CBAM) in 2026, countries in the region are considering putting in place a taxonomy to address it.³¹

There is little doubt that Oceania will be the scene of real urgency when it comes to manage its high-emission sectors that are exposed to developments in international carbon taxonomy, in addition to the Safeguard Mechanism Reforms which passed in Australia earlier this year, which put a price on carbon for the first time since 2014 for many companies. From cement and steel to hydrogen, companies in the region will face a period of flux over the coming three years, which will demand that they apply more rigor and energy to how they report their climate risk and decarbonization plans.

Progress should be boosted by the introduction of mandatory disclosures in Australia, with Treasury proposing the first tranche of entities to commence reporting for FY25, regardless of whether those companies are listed on the Australian Securities Exchange. The proposed requirements include assurance of disclosures, initially focused on emissions and governance-related disclosures and expanding to reasonable assurance of all disclosures by FY28 for the largest entities.

As for sectors, energy (especially in coastal areas), agriculture, and forestry's vulnerability to physical risk should focus companies in these sectors on the need to develop more effective transition plans that address the risk and factor in operational resilience. Their need is clear. Other sectors with less visible liabilities, such as financial services, may face a greater challenge when it comes to prioritizing physical risk and transition plans.

In contrast to other, more mature markets, such as Europe and the US, Oceania has yet to develop its own taxonomy that could help to guide the transition of the economy, financial portfolios, and company activities. The Australian Sustainable Finance Institute (ASFI) commenced the Australian Taxonomy Development Project in July 2023, which will enable companies to better identify opportunities to create sustainable assets and activities. In the interim, the challenge will remain to reflect potential value at risk and/or opportunities in the financial statements in the absence of a mature mandatory taxonomy. As a result, 2025 will be the critical year for making progress in this respect.

²⁷ SBTi Monitoring Report 2022, <https://sciencebasedtargets.org/reports/sbti-monitoring-report-2022>

²⁸ Europe must harmonise its patchwork of transition plan requirements, <https://www.finance-watch.org/europe-must-harmonise-its-patchwork-of-transition-plan-requirements>

²⁹ "Climate-related financial disclosure: Consultation paper, <https://treasury.gov.au/sites/default/files/2023-06/c2023-402245.pdf>

³⁰ Australia to introduce mandatory climate reporting in 2024, <https://sustainabilitymag.com/articles/australia-mandatory-climate-reporting-for-companies-in-2024>

³¹ What Does the EU's Carbon Border Adjustment Mechanism Mean for Asian Economies? <https://thediplomat.com/2023/09/what-does-the-eus-carbon-border-adjustment-mechanism-mean-for-asian-economies>

2

Sector focus

This year's report once again highlights the correlation between sector and disclosure quality and coverage. Those sectors with the greatest exposure to transition risk tended to post higher scores for their disclosures in 2023, in terms of both quality and coverage.

Encouragingly, both quality and coverage saw increases across sectors. Disclosure quality leapt significantly from 39% to 48% across all TCFD financial sectors, with coverage improving from 76% to 86%. Meanwhile, TCFD nonfinancial sectors saw quality increase from 45% to 50%, while coverage similarly improved, from 86% to 92%. There were some movements in the relative positions of various sectors. Energy and insurance continue to top the league for the quality and coverage of their disclosures but, notably, their quality performance in 2023 is largely matched by other financial institutions (e.g., exchanges, other financial services providers, ratings agencies, and credit bureaus). The disclosure quality score for this sector has jumped from 46% to 54%.

Between 2021 and 2022, the insurance sector recorded an impressive 34% increase in its quality score, demonstrating that the sector is making enormous strides in improving quality. Indeed, the quality of disclosures for all sectors has improved, with maximum change being seen for these sectors: other financial institutions; real estate; mining; agriculture, food and forest products; and materials and buildings.

When it comes to coverage scores, these are the sectors that have seen the greatest year-on-year improvement: financial asset owners and managers; agriculture, food and forest products; mining, materials and building; real estate; and banks.

Figure 4.

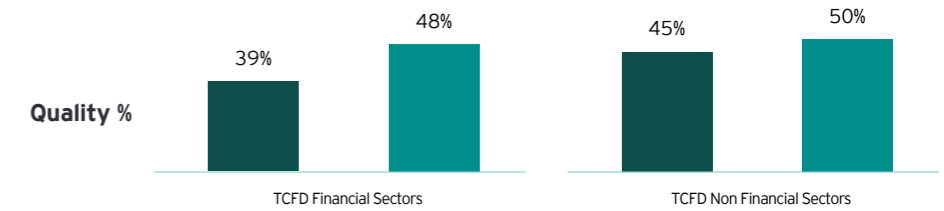


Figure 5.

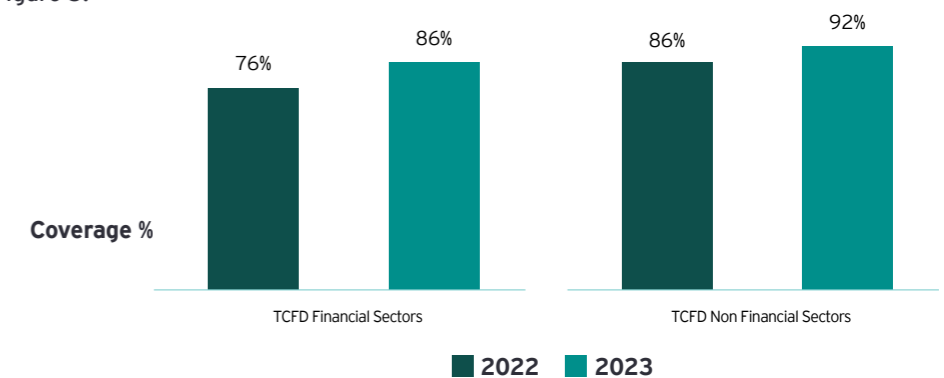


Table 5.

Sector	Quality 2022	Quality 2023	Coverage 2022	Coverage 2023
Agriculture, food and forest products**	37%	46% ▲	76%	88% ▲
Banks*	39%	46% ▲	77%	86% ▲
Energy**	51%	55% ▲	93%	95% ▲
Financial asset owners and managers*	35%	40% ▲	72%	80% ▲
Insurance*	51%	55% ▲	90%	93% ▲
Materials and building**	46%	54% ▲	87%	95% ▲
Mining**	42%	51% ▲	85%	93% ▲
Other financial Institutions (e.g., Exchanges, other financial services providers, rating agencies and credit bureaus)*	46%	54% ▲	86%	84% ▼
Real estate**	40%	48% ▲	83%	91% ▲
Retail, health and consumer goods** ¹	44%	50% ▲	86%	92% ▲
Telecommunications and technology** ¹	46%	52% ▲	87%	91% ▲
Transportation**	46%	50% ▲	84%	90% ▲

*Financial Sector **Non-Financial Sector

¹ These sectors are not part of TCFD sector classification, however were identified as High Risk sectors by sector leads in 2021 study

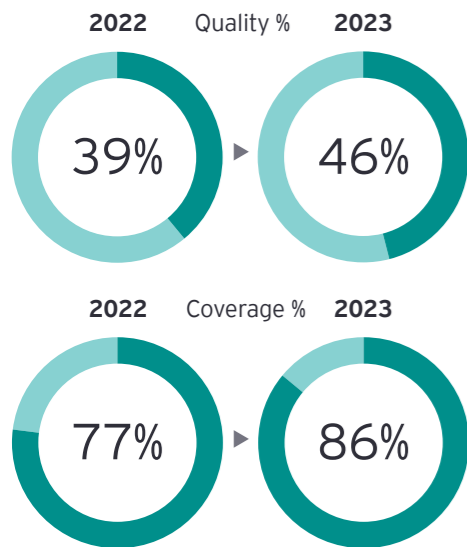
Spotlight on Financial Services



Khadija Ali,
UK Financial Services Climate Change and Sustainability Services Leader, Ernst & Young LLP, EY UK

Addressing and engaging with the decarbonization agenda is not a novel experience for most large global financial institutions. While the sector, as a whole, has typically been at or near the top of most of the key indicators, there are signs of stratification within the cohort.

Figure 6. Banks



The larger institutions recorded marginal increases in both climate disclosure quality and coverage. Banks, which form a large cohort within the financial services sector, saw improvements in both quality and coverage, but the context is concerning. A quality score of 46% is very low for such a vital sector (albeit up from 39% last year). Banks' coverage, meanwhile, offers more hope, rising from 77% to 86%.

A look further across the sector shows that other financial institutions, such as credit ratings agencies, are now demonstrating sharper and more marked improvements. This is a welcome development, given the ground many of them need to make up to match the rest of the sector.³²

So, while disclosure is improving incrementally, for many in the sector the focus must now be on delivering granular transition planning that moves beyond lofty - but distant - net-zero goals toward action-driven, measurable progress. So far, what planning that has emerged from the sector has lacked detail and depth. Progress on that must be a priority for the coming year.

Effective transition planning in this sector is especially challenging given the integration of financial services into the wider economy. Managing those relationships, in terms of both regulation and expectation, is perhaps the greatest challenge facing financial services going forward. Yet it's also true that the sector has an extraordinary opportunity to support and progressively encourage other sectors' progress in decarbonizing.

While previous iterations of the Barometer have reflected the sector's progress with improving governance and risk management, we are now seeing targets and metrics, as well as strategy elements, come into play. Unsurprisingly, the sector scores highly on reflecting climate risk in financial statements, but concerns remain over whether banks and others are issuing statements that draw out comparisons between the current trajectory and a Paris-aligned trajectory. Illustrating that divergence - with all the sensitivity and immediate impacts included - represents the next frontier for climate risk reporting in the financial sector.

Tying this all together - how risk management, strategy and targets all interact with, and support, each other - is a crucial next step in the transition planning process.³³

An optimistic view would suggest that the sector stands ready to capitalize on the opportunities that are beginning to emerge. From energy transition and new technologies through to new funding models (especially sustainable finance), financial services companies will need to take a holistic view on capital allocation, as well as the recruitment and retention of the right skills and expertise.

Financial institutions have done a fantastic job of doing the foundational work. It's now a question of taking it to the next level, with a particular focus on the short-term measures. That's one area where we absolutely need to see a much clearer picture from the financial services sector.

As more companies adopt IFRS S2 globally, financial institutions will need to understand how climate risk is integrated into financial reporting as a whole. Hopefully, IFRS S2 will serve as a catalyst for greater integration of climate risk reporting into the overall reporting picture.

Case study

Tokio Marine Holdings Inc.

Japanese Insurance company, Tokio Marine, has pledged to reach net-zero emissions by 2050, and is focusing on its portfolios and partnerships to achieve its target. The company is working to help customers become carbon neutral with a focus on renewable energy including offshore wind power and solar power, by developing insurance products and solutions that support the widespread adoption of these technologies.

Tokio Marine also aims to provide preventative services and solutions that contribute to disaster prevention and provide enhanced resilience from natural disasters.

As part of its commitment, the insurer has decided not to underwrite new capacities for carbon-intensive fossil fuel-related power generation projects, instead supporting carbon capture and storage technologies to promote innovative approaches. The company has joined the Net-Zero Insurance Alliance to support the decarbonization of underwriting portfolios and meet its net-zero target.

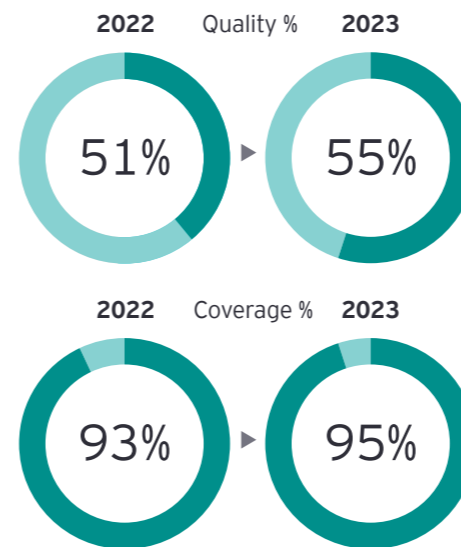
Spotlight on Energy



Fiona Hancock,
Climate Change and Sustainability Services Partner, Ernst & Young Australia

The energy sector leads the way in many of the measures tracked by the Barometer. From transition planning, to outlining the quantitative impact of climate risk, the sector consistently outperforms its peers.

Figure 7. Energy



Certainly, energy is ahead on transition planning, and the quality and coverage of its climate-related disclosures remains strong. But amid those strong results are some trends that should concern those looking to the sector as a flagbearer for the net zero agenda.

The 2022-23 period has been marked by considerable volatility in the energy markets. Notably, the Ukrainian crisis pushed prices skyward, creating enormous profits for many companies in the sector. How that has impacted the sector's determination to push ahead with transition planning remains to be seen, but there can be no excuse for the energy sector losing focus on planning for, investing in, and engaging with the decarbonization agenda.

The challenge for the sector now is to retain its engagement and ambition of earlier years and to continue to lead on this crucial issue. It is clear that transition risk is intensifying. Estimates from the International Energy Agency about the approaching peak of fossil fuel demand are only serving to focus attention on the seismic shifts that are rapidly approaching.³⁴

The sector also faces some significant challenges on the regulatory front. In the US, the sector will have to grapple with the Bipartisan Infrastructure Law and the Inflation Reduction Act. Meanwhile, in Australia, reforms to the Safeguard Mechanism will put a price on emissions, which will increase the cost of producing and using fossil fuels within Australia.³⁵ These will not only impact the big oil and gas players, but also infrastructure and support services.

Some energy companies have recognized that their business model may not survive over the next few decades. So, they are already starting to invest in new, fast-growing business models, such as onshore and offshore wind.

The increase in regulatory pressure - and the spike in profitability - may go some way to explaining the increasingly defensive approach being taken by many companies in the sector. But with the growing incidence of sector disclosure focusing on qualifying scenarios that argue for significant fossil fuel use for decades to come, the industry is in danger of falling behind in transition planning.

Energy has consistently topped the Barometer rankings for its proactive approach to risk disclosure. Nevertheless, if it fails to push on with genuine action - for example, by not setting Scope 3 targets - it risks undermining much of the good work it has done in the past half-decade.

Some energy companies have recognized that their business model may not survive over the next few decades. So, they are already starting to invest in new, fast-growing business models, such as onshore and offshore wind.

Case study

National Grid plc

National Grid plc, a UK-based multinational electricity and gas utility company, has made a commitment to decarbonize its operations by 2050. The company aims to achieve net-zero emissions across its electricity and gas businesses through a combination of investments in renewable energy, new technologies and energy-efficient infrastructure.

The company's Clean Energy Vision aims to move to US fossil fuel-free gas and electric systems, with the potential for developing new sustainable energy products and services. The company has also dedicated significant investments to developing innovative low-carbon gas alternatives, carbon capture, and long-term electricity storage, and invest in opportunities in emerging energy markets such as interconnectors, offshore wind, and renewables in the UK and the US.

In terms of financial accountability, the company quantifies the percentage share of spending and revenue aligned with the transition to a 1.5°C world, with significant investments made in their journey to net zero. This includes £6.7 billion in investments over the past year, with 73% dedicated to green initiatives, and an expected expenditure of £30-£35 billion from 2021-22 to 2025-26.

³² FSB publishes annual progress report on climate-related disclosures, <https://www.fsb.org/2023/10/fsb-publishes-annual-progress-report-on-climate-related-disclosures>

³³ Policy Statement: FCA and PSR Net Zero Transition Plan, <https://www.fca.org.uk/publication/corporate/fca-psr-net-zero-transition-plan.pdf>

³⁴ Understanding GEC Model scenarios, <https://www.iea.org/reports/global-energy-and-climate-model/understanding-gec-model-scenarios>

³⁵ "Australia recalibrates safeguard mechanism to hit carbon targets", <https://www.ft.com/content/e2e0feab-f6f6-417f-b208-eee5340ccb4e>

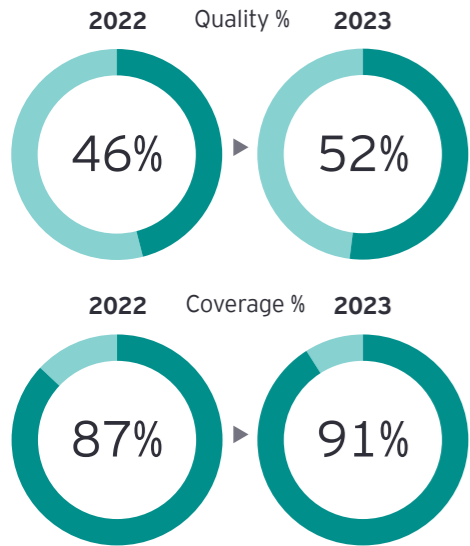
Spotlight on Telecommunications and Technology



Bruno Sarda,
Climate Change and
Sustainability Services
Principal, Ernst and Young LLP

Technology has performed well across all metrics in this year's Barometer, in terms of both the quality and coverage of disclosures. Quality rose from 46% to 52%, and coverage rose from 87% to 91%.

Figure 8. Telecommunications and technology



Despite facing many of the same challenges as other sectors in terms of exposure to climate risk, the telecommunications and technology sector continues to demonstrate its unique engagement with the issue.³⁶

While the sector still has much work to do, it is emerging as a key player in designing solutions to meet the decarbonization challenge. With its overall score of 57% for decarbonization strategy, the telecommunications and technology sector only trails behind the highly exposed sectors of energy, mining, and transport when it comes to transition planning.

It is worth understanding why telecommunications and technology occupies a unique position in the push toward transition, and what distinguishes the sector from its counterparts. Many technology companies are beginning to integrate decarbonization strategies into their overall business planning as a way to capitalize on the opportunities that will undoubtedly emerge.³⁷ Its high scores on the governance, risk management and targets and metrics pillars suggest that the sector is grappling with both the need to instill resilience and the need to capitalize on the transition.

There are two key elements that drive the sector's increasingly positive approach. Firstly, there is a commitment to innovation. Few companies in the space thrive without experimenting with new systems, products and processes.³⁸ Secondly, the ability to thrive amid disruption is baked into many of these company's operating models. With relatively short product roadmaps and life cycles, tech firms have transformation and disruption embedded in their DNA.

These and other factors are combining to mark the sector out in the current landscape. We see a much greater level of quantitative disclosure, in terms of both climate risks and opportunities (49% is the highest score of all sectors). While other sectors remain heavily weighted toward an emphasis on qualitative elements, companies in telecommunications and technology are at ease drawing on their experience to better identify and quantify the risks and opportunities they face.

Similarly, as a data-driven sector, telecommunications and technology is ideally placed to look beyond the need to price risk and see the potential opportunities that the low-carbon economy offers, not just for companies' own products and services, but also for other sectors in need of technological solutions.³⁹

Technology companies are increasingly positioning themselves as part of the solution to climate change.⁴⁰ Whether that's through developing more wireless infrastructure, pushing dematerialization

across a range of industries, or pioneering smart solutions in exposed sectors such as agriculture and energy, technology's leading role in the decarbonization agenda is being reflected in its climate disclosures.

Nevertheless, risks remain. A major challenge for telecommunications and technology firms is their reliance on rare earth metals, but this is only one of the value chain-related exposures they face. Add in potential geopolitical instability, regional conflicts and forced migrations due to water shortages or extreme heat, and it's clear the technology sector must remain innovative to meet its own challenges.

Case study

Microsoft Corporation

Microsoft Corporation has a strong commitment to sustainability and climate action initiatives. The technology company has worked with organizations such as the UK Met Office and CSIRO to create cutting-edge weather, climate and climate intelligence technology. Additionally, Microsoft is using artificial intelligence to improve climate risk assessment and management, sub seasonal forecasting, and to understand the connections between physical and societal risks.

The company has also joined forces with Shell, Constellation and ENGIE to acquire Carbon-free energy resources and 100% renewable energy facilities by 2025, working towards 100% carbon-free energy by 2023. They are investing in innovative solutions like hydrogen fuel cells and flywheel UPS, along with thermal energy utilization and air-to-water generation to improve energy efficiency. With the launch of its Climate Research Initiative (MCRI) in 2022, Microsoft aims to make a significant impact on climate mitigation and adaptation on a global scale.

³⁶ Net Zero for Tech, <https://netzeroclimate.org/sectors/tech>

³⁷ Telefonica Climate Action Plan, <https://www.telefonica.com/en/wp-content/uploads/sites/5/2022/03/climate-action-plan-telefonica.pdf>

³⁸ 'Now or never' - how technology and collaboration can accelerate decarbonization, <https://www.weforum.org/agenda/2022/05/technology-collaboration-accelerate-decarbonization>

³⁹ "How digitalization acts as a driver of decarbonization", https://www.ey.com/en_ch/decarbonization/how-digitalization-acts-as-a-driver-of-decarbonization

⁴⁰ 12 decarbonising technologies for cities, <https://impact.economist.com/sustainability/net-zero-and-energy/sustainable-disruption-12-decarbonising-technologies-for-cities>



3

Climate risk and financial performance

Companies now face demand for greater scope and detail in their climate-related disclosures. So, the most pressing question they will need to answer in the coming years is how their risks and strategies are reflected in their financial statements.

Addressing and reflecting climate risk in reporting is not a tick-box exercise. Rather, it is a comprehensive, forward-looking effort to understand the anticipated financial impact.

Until recently, the general trend has been for climate strategy and risk management to remain largely separate from its corporate counterpart - developed independently and included as an addendum to the core strategy.

In the first five years of the Barometer, we have put a strong focus on how a company assesses its climate risk: whether that's using climate scenarios or not, and how the company somehow captures the key result in the financial statement, not only in the annual report.

Our latest Barometer shows that just 26% of companies are providing quantitative impacts of climate-related risks in their financial statements. Beyond that, when we look at the four pillars of the TCFD - governance, strategy, risk management, and metrics and targets - the score for the strategy pillar remains low, with the quality score at 48%. This is too low.

Low performance on strategy, combined with the regulatory requirement for listed companies and large companies in Europe to increase disclosure, will inevitably create a big tension point that companies urgently need to address.

Addressing and reflecting climate risk in reporting is not a tick-box exercise. Rather, it is a comprehensive, forward-looking effort to understand the anticipated financial impact.⁴¹ As such, it should be assessed in the context of the company's value chain and wider market dynamics. This is why the European Commission has acknowledged that companies have three years to reach the required levels of disclosure. The Barometer will continue to measure how the quality of strategy improves over time.

Overall disclosure of climate change impact in the financial statements has increased this year, to a point where 33% of the companies have referenced climate-related financial impact in their financial statements, against either quantitative or qualitative aspects. Although the overall disclosure of climate change impact in financial statements has increased this year, more companies need to illustrate and disclose the link between climate impact and financial performance.

The research continues to show companies doing little to prove that they have embedded genuine risk management practices that incorporate climate risk. Neither have they embedded climate risk within their corporate strategy. This is a serious concern, given that climate risk

should, by now, be firmly embedded in any future strategy, for both the short- and long-term. Without that, companies risk ignoring material threats and missing out on potential opportunities as part of the transition.

The majority of references to climate-related financial impact are qualitative in nature and lack quantitative elements. The most common financial impact disclosed (31% of the keywords referenced) is associated with climate or environmental risk, followed by asset impairment (20%), a finding that tallies closely with the 2022 research.

Figure 9. Are climate related matters referenced in the financial statements?

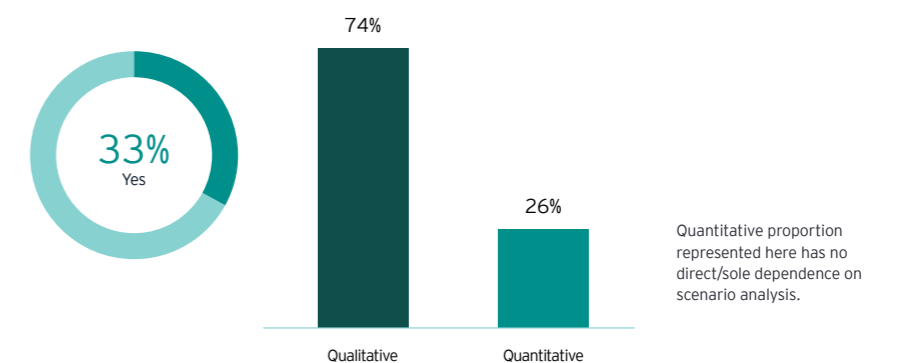
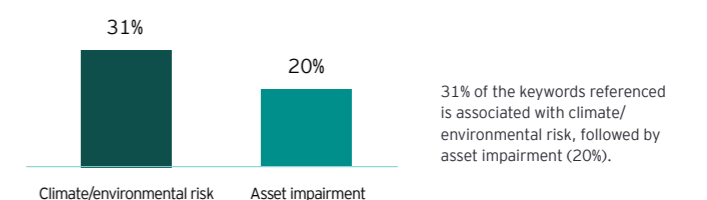


Figure 10. Keywords used in financial impact disclosures



⁴¹ Climate-related risks in the financial statements, <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FsiteAssets%2FEFRAG%2520Secretariat%2520Briefing%2520Paper-%2520Climate-related%2520risks%2520in%2520the%2520financial%2520statements.pdf&AspxAutoDetectCookieSupport=1>

Meanwhile, there have been some fluctuations in focus in terms of the variety of financial impacts referenced. Property, plant and equipment, for example, has dipped by 5% since last year, making space for referencing against emission impact (an increase of 8% from 2022).

References to renewable energy have, in turn, increased from 2022, a finding most likely driven by a renewed focus on developing transition strategies toward a lower-carbon economy.

From a sectoral point of view, there remains a marked gulf between the qualitative and quantitative elements of climate-related matters in financial statements. This is important, since it emphasizes that few companies are taking an integrated approach to climate risk reporting - perhaps waiting for regulation to force their hand.

Four sectors are leading the way in embedding a quantitative financial impact assessment into their disclosures. These are: telecommunications and technology; transportation; other financial institutions; and energy. While financial asset owners, insurers, real estate companies, banks and agriculture businesses demonstrate good qualitative alignment with climate-related financial impact, they need to consider how they can improve their quantitative disclosures.

Indeed, the forthcoming introduction of IFRS S2 makes it clear that there will be more emphasis on climate-related financial impact. This will be in cases where the entity is expected to provide an explanation as to why it has not reported quantitative figures and information pertaining to the impact of climate-related risks and opportunities.

The direction of travel is toward far greater rigor in the reporting of the financial impact of climate risk. Merely dipping a toe in the water, or hiding behind commercial sensitivity, simply won't cut it anymore. While those companies that have got ahead of the game with TCFD are to be commended, they cannot simply rely on incremental change. Climate impact must be given equal billing with other material impacts and be clearly and consistently quantified in financial statements.

Scenario planning

In total, 58% of companies studied for the Barometer perform scenario analysis, up from 49% the previous year. Among the companies that fell into this category, a greater percentage mentioned quantitative referencing to various types of scenarios. Yet, there is room for improvement since more companies overall should be performing scenario analysis.



What a leader looks like

Companies that lead the way in developing effective and robust scenario analysis tend to have certain factors in common. Most importantly, they approach the topic with inclusive and broad-based teams that include not only sustainability professionals, but also personnel from operations, strategy, procurement, and other functions. Bringing those teams together, as discussions and planning on climate risk get underway, appears to have translated into corporate strategies that enable companies to manage climate risk and capitalize on opportunities more effectively than their peers.

So, companies that want to be leaders in scenario analysis should adopt this approach. By doing so, they are more likely to extend the scope of their analysis to include a greater proportion of their group's revenue. They are also more likely to include different functions in the process, presenting a vital opportunity to raise the visibility of both risk and opportunity to senior management. Any scenario plan that can reliably predict a 20% increase in sourcing costs by 2030, or where optimized manufacturing and transport sites should be located, is likely to get the attention of the board.

It is also becoming more common to see companies aim to align their mid-term corporate planning cycles with long-range scenarios. Previously, short-term plans have tended to ignore or de-prioritize risks and opportunities from climate change. Now, however, key functions in leading companies are using climate risk planning as a mechanism for stress-testing their current plans.

Finally, we're seeing an evolution in the sectors that lead. While energy, oil and gas, and utilities continue to lead on developing detailed and effective scenario planning, we are increasingly seeing the food and beverage sector, as well as consumer products, catching up. This reflects the fact that today we're witnessing increased exposure to physical climate changes and associated weather events - from water availability, to transport disruption, to severe events like flooding and bushfires.

A post-COVID world has also shone a light on the reliance of almost all sectors on one another, typically in relation to raw materials, packaging or transport. That reliance is being impacted by physical risk, leading to scarcity or price increases, as well as by carbon policies, which could result in national protectionism, or price rises as carbon liabilities increase and are passed on to customers.

Effective Leadership

Adoption of the IFRS Sustainability Disclosure Standards

As the decarbonization agenda gathers pace, the regulatory and standards landscape continues to evolve.

The 2023 EY Global Climate Risk Barometer arrives in the middle of a vital moment in that evolution, as global authorities continue their journey toward consolidated sustainability standards.

The 2023 EY Global Climate Risk Barometer arrives in the middle of a vital moment in that evolution, as global authorities continue their journey toward consolidated sustainability standards. This consolidation, regulators promise, will help companies to benefit from the investments they've already made in sustainability disclosures while reducing the growing complexity and perceived burden of those disclosures.

The picture should become clearer with the introduction of IFRS S2, which companies should prepare for in advance of 1 January 2024 if they plan to adopt the ISSB Standards. IFRS S2 has four main pillars: governance, strategy, risk management, and metrics and targets.⁴² These pillars align with the pillars of the TCFD. Each will require executive sponsorship and leadership from the top to ensure that the next iteration of climate-related disclosure regulation is not only covered from a compliance perspective, but also transformed into an opportunity to help businesses transition to a decarbonized future.

To measure readiness for IFRS S2 in 2023, we needed to address the new standards' constituent parts and evaluate companies' performance against the four key pillars. Having done that, we were able to paint a picture of whether organizations are prepared for the introduction of IFRS S2.

The stated goal of the ISSB's IFRS Sustainability Disclosure Standards is to "allow companies and investors to standardize on a single, global baseline of sustainability disclosures for the capital markets, with any additional jurisdictional requirements being built on top of this global baseline."⁴³ Nevertheless, preparers should be aware that there are additional requirements in IFRS S2, which should be considered when measuring readiness.

Our analysis generated varied insights, with some areas of ISSB compliance having greater engagement than others:

- ▶ In relation to **governance**, companies are adopting the increased ISSB disclosure requirement and disclosing which skills and competencies are required at board level to oversee climate-related strategies.

- ▶ Looking at **strategy**, companies are moving toward additional disclosure around scenarios that include detailed analysis and its inputs, and the rationale for choosing specific scenarios, time horizons and assumptions. In addition, companies have started to include value chain emission reduction targets within their overall reduction targets.
- ▶ From a **metrics and targets** perspective, companies are moving toward disclosing their Scope 3 emissions for all the material categories.

The research reveals several emerging trends that offer a picture of where companies are - and how far they have to travel. The key focus of this research, insofar as it relates to companies' preparedness for the transition to ISSB standards, has been on the scope and coverage of disclosure, rather than appraising the quality of the disclosure made so far under the new IFRS S2.

⁴² <https://www.ifrs.org/content/dam/ifrs/project/climate-related-disclosures/issb-exposure-draft-2022-2-climate-related-disclosures.pdf>

⁴³ "Ten things to know about the first ISSB Standards" <https://www.ifrs.org/news-and-events/news/2023/06/ten-things-to-know-about-the-first-issb-standards>

We are seeing leading companies that have typically initiated this climate risk analysis, looking at how climate could impact, positively or negatively, their organization's business strategy. And those leading that effort are not taking a regulatory-driven perspective. Rather, they are strategizing their business model beyond near-term profitability, restructuring operations across their value chain, and sharpening their focus on market growth. In such cases, the responses are not necessarily just focused around a decarbonization plan. A response can also involve alternative sourcing, pursuing more eco-friendly approaches to product design, or shifting to new markets.

In short, these issues are becoming part of core topline business strategy. Companies that have understood the links between climate risk and their business growth strategy are well positioned to then address the new climate-related disclosure requirements in IFRS S2.

As this year's Barometer makes clear, more needs to be done, and quickly. Specifically, that means companies ensuring that they have established an effective process by which management is informed about entity-level climate-related issues and the methods of monitoring them. It also requires more scrutiny around the resilience of the organization's strategy, which means taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Then, companies must establish properly integrated and robust risk management systems to better identify, assess and manage climate-related risks. They should also focus on developing and disclosing dedicated climate-related targets to better manage the associated risks and monitor performance and progress against these targets.

Sectors and markets

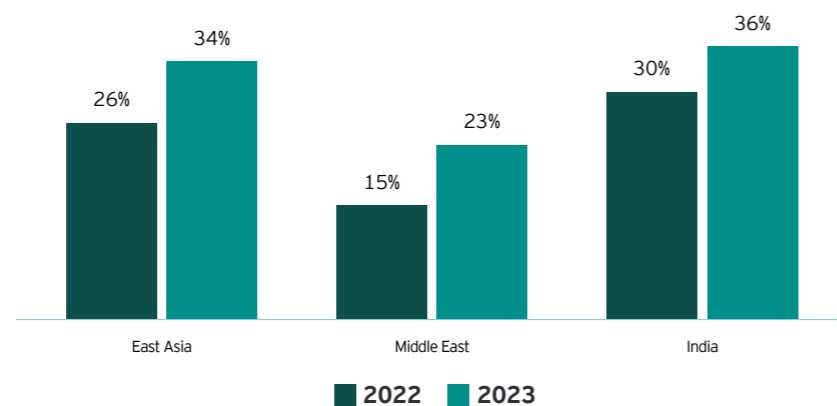
From a sectoral perspective, there are indications that certain sectors are taking a lead in adopting many of the additional disclosure requirements when preparing for ISSB.

The energy sector has, perhaps unsurprisingly, proven to be the most active sector when grappling with ISSB so far. The other financial institutions sector and the materials and buildings sector are also demonstrating a commitment to building on strong foundations of TCFD compliance to adopt ISSB.

Crucially, these sectors have all delivered a strong TCFD quality score. Meanwhile, the majority of companies within these leading sectors have already disclosed and responded to the ISSB's additional requirements. Nevertheless, there are some sectors - notably financial asset owners and managers - that are in genuine need of improvement to bring their disclosure up to date against both the TCFD recommendations and ISSB readiness.

The journey toward ISSB standard readiness is also further along in certain markets. For example, Australia, Brazil and the UK are all leading the way in improving the quality of their disclosures, reflecting the pace of adoption of new standards and guidelines. On the other hand, there are a significant number of countries where the quality of disclosure is in urgent need of improvement.

Figure 11. Quality %



We cannot ignore quality scores as low as 23% (Middle East), 34% (Southeast Asia) and 36% (India). Companies in these regions have to improve their disclosure, and fast. Within a year, companies will be required to disclose the quantitative impact of climate risk on their financial performance. To deliver that, companies will need to ensure they have the right skillsets in the boardroom to deliver real and lasting progress. Just as we may be entering a critical period in the evolution of climate change, we may also be on threshold of a vital period of change as companies begin to adopt a more holistic approach to their climate-related disclosures.

A transitory snapshot reveals that, while work is already underway, the pace and intensity of preparation for the new regime needs to increase in numerous sectors and markets. But that work will be helped by the fact that, in general, global companies have dramatically increased their disclosure quality and coverage around the TCFD's 11 recommendations.

Taking the four pillars of ISSB transition into account,⁴⁴ a varied picture begins to emerge. Broadly speaking, companies appear to be scoring well on the two components where there is the most overlap between TCFD and ISSB, while the other two require a more proactive approach to keep pace with regulatory change.

⁴⁴ ISSB decides to prioritise climate-related disclosures to support initial application, <https://www.ifrs.org/news-and-events/news/2023/04/issb-decides-to-prioritise-climate-related-disclosures-to-support-initial-application>

1 Governance

Around 59% of companies disclosed on skills and competencies to oversee strategies and also on how a committee is set up to oversee setting of targets.

37% of companies have disclosed information on integration of a dedicated control and procedures for management climate-related activities.

3 Risk Management

3% of companies have disclosed information pertaining to changes in process used to identify climate-related risks prior to reporting period.

In terms of governance, almost 60% of companies disclosed on skills and competencies to oversee strategies, and also on whether, and how, a committee oversees the setting of targets. Meanwhile, 37% of companies have disclosed information on the integration of dedicated control and procedures for the management of climate-related activities.

When it comes to broadening the scope of targets included in the ISSB's IFRS Sustainability Disclosure Standards, the figures are worrying, however. The Barometer shows that just 22% of companies have disclosed details on carbon pricing, cross-industry-specific metrics, and targets on capital expenditure, operational expenditure and research and development from no or low-greenhouse gas products. A mere 12% of companies have disclosed emission

2 Strategy

5% of companies have disclosed on quantitative/qualitative information impacting financial planning.

34% of companies mentioned value chain emission reduction, use of carbon offsets and % intended through carbon avoidance and offset programs.

Around 65% have disclosed their progress against previously set targets.

57% companies around disclosure scenarios associated with transition or physical risks.

details for legal entities and little over half (54%) have disclosed Scope 3 emission categories. Finally, just 33% of companies have had their targets validated by a third party.

As TCFD and ISSB continue to consolidate, with the ISSB taking responsibility for TCFD monitoring,⁴⁵ more will be expected of companies that report. This is especially true when it comes to the granularity of the disclosure required. So companies should aim to use the time available to not only focus on the higher-level areas of disclosure, such as strategy and planning, but also to drill down into more detailed areas of their decarbonization plans.

Companies that are grappling with the two ISSB pillars that represent the greatest leap forward from TCFD to ISSB still have some way to go. Just 5% of companies have disclosed on quantitative or

4 Metrics and Targets

22% of companies have disclosed details on carbon pricing, cross industry specific metrics and also targets on CAPEX, Opex, R&D from no or low-greenhouse gas products.

12% of companies have disclosed emission details on legal entities and 54% have disclosed Scope 3 emission categories.

33% companies have had targets validated by a third party.

qualitative information impacting financial planning. Meanwhile, only a third (34%) have disclosed some aspects of their value chain emission reduction, use of carbon offsets, and the percentage reduction in emissions that they intend to achieve through carbon avoidance and offset programs.

Around 65% of companies have disclosed their progress against previously set targets, while 57% have disclosed around scenarios associated with transition or physical risks. At the same time, preparations for the new risk management disclosure regime will need more focus. Just 3% of companies have disclosed information pertaining to changes in process used to identify climate-related risks prior to the reporting period.

⁴⁵ "IFRS Foundation welcomes culmination of TCFD work and transfer of TCFD monitoring responsibilities to ISSB from 2024", <https://www.ifrs.org/news-and-events/news/2023/07/foundation-welcomes-tcf-d-responsibilities-from-2024>

5

Transition planning

It's encouraging to see that greater engagement with sustainability disclosures has been welcomed across the board. Nevertheless, companies are now faced with a stark challenge: to design and implement an effective transition plan that takes into account real-world scenarios and commits real resource to the effort.

This year's Barometer sought to ask the following questions:

- ▶ What proportion of companies are publishing transition plans?
- ▶ How detailed are they?
- ▶ Do these plans offer clear and measurable actions?

This year's Barometer shows that 53% of the companies that fell under the scope of the research are providing disclosure against some kind of transition plan. The remaining 47% are failing to do so. These scores are underwhelming and serve to highlight the work needed to develop credible pathways to decarbonization.

Companies should focus - as a matter of urgency - on designing and implementing climate transition plans. These plans must consider current risks and incorporate plausible and rigorous future risk scenarios that will impact the company going forward.

In the UK - a leading territory for carbon-related disclosure - over 80% of UK listed firms say they are committed to becoming net zero by 2050, according

Companies should focus – as a matter of urgency – on designing and implementing climate transition plans.

What is a transition plan?

A transition plan is a time-bound action plan that clearly outlines how an organization will pivot its existing assets, operations, and entire business model toward a trajectory that aligns with the latest and most ambitious climate science recommendations, i.e., halving greenhouse gas emissions by 2030 and reaching net zero by 2050 at the latest, thereby limiting global warming to 1.5°C. A well-structured transition plan helps companies to stay in line with, or ahead of, relevant policy goals for the organization.

to EY research.⁴⁶ Yet the same research found that just 5% of firms have publicly disclosed detailed, actionable transition plans. Furthermore, many of these still have work to do to fully align with the guidance of the UK's Transition Plan Taskforce (TPT).⁴⁷

This is concerning. Any company that has been approved by the SBTi, and therefore has an ambitious emission reduction target, should already be thinking about how it will implement its plan, what the costs will be, and what the decarbonization pathway looks like.

Put simply, the Barometer indicates that companies still have a lot of work to do, not only to meet the disclosure requirement of CSRD, but also more generally to implement their plans.

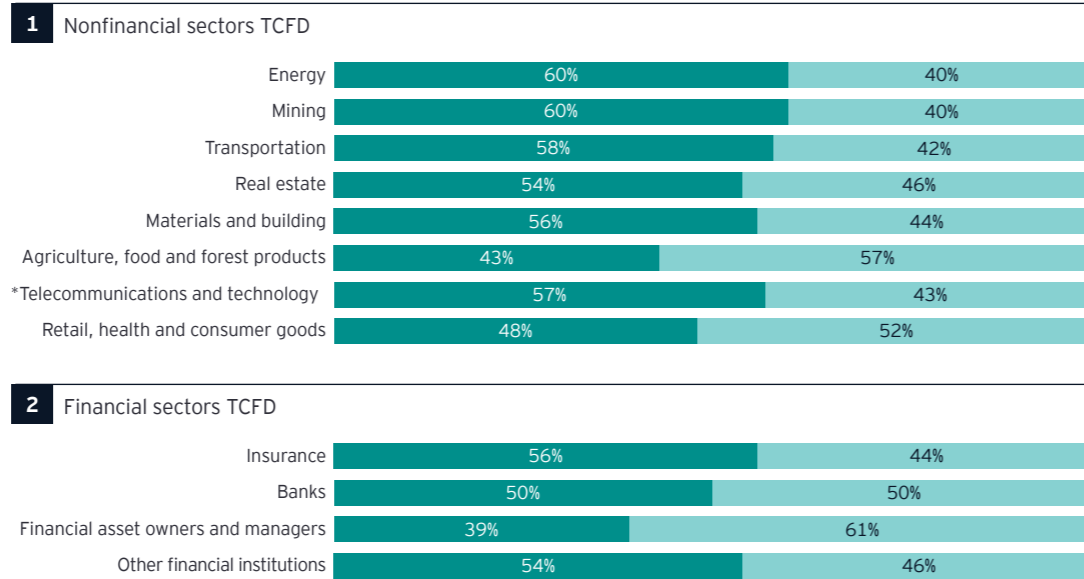
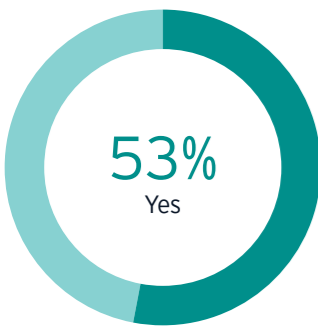
It is essential that companies raise their commitments in front of their management and supervisory boards to gain the necessary endorsement and resources for greater progress to be made.

As we might expect, the sectors with the greatest climate-related exposures are those that have provided evidence of the most detailed planning. Energy (60%), mining (60%), transport (58%) and telecommunications and technology (57%) lead the way in the nonfinancial sectors. There are also some encouraging levels of planning among real estate and materials and building. Once again, agriculture lags behind, with just 43% of companies in the sector reporting on a detailed plan to transition.

⁴⁶ "Only 5% of FTSE 100 have published Net Zero plans that would be deemed 'credible' under Government's Transition plan guidance", https://www.ey.com/en_uk/news/2023/04/only-five-percentage-of-ftse-100-have-published-net-zero-plans

⁴⁷ "Only 5% of FTSE 100 have published Net Zero plans that would be deemed 'credible' under Government's Transition plan guidance," EY website, [ey.com](https://www.ey.com/en_uk/news/2023/04/only-five-percentage-of-ftse-100-have-published-net-zero-plans)

Figure 12. Does the organization disclose a specific net zero strategy/transition plan/decarbonization strategy?



*These sectors are not part of TCFD sector classification, however were identified as High Risk sectors by sector leads in 2021 study

Meanwhile, insurance (56%) and other financial institutions (54%) lead the financial sector rankings. Financial asset owners and managers are lagging behind, however, with only 39% publishing a transition plan.

One of the core tenets of IFRS S2 is the requirement for companies to develop and publish their transition planning. Across global companies, we can certainly see widespread adoption of, and commitment to, longer-term pledges to transition toward net zero. These targets are well-intentioned and well-presented, but as the regulatory demands continue to grow, there is limited evidence of companies outlining actual planning in the short- and medium-term.

In terms of what has been achieved to date, the type of detailed disclosure varies. For some companies, disclosures cover time horizon-aligned targets or a decarbonization roadmap with a focus on the value chain. For others, the focus is on collaboration with industry peers and the use of carbon offsetting techniques.

Certain companies are publishing transition plans that include planned initiatives and actions taken. These may take the form of the creation of low-carbon products and technologies, as well as partnerships or voluntary commitments such as methane emission reduction.

Companies already disclosing in line with the requirements of TCFD and ISSB have made strides with using the common elements of both standards regimes to begin drafting their transition plans. These common elements include:

- ▶ Assessment and disclosure of climate-related risks and opportunities
- ▶ Implementation of scenario analysis and impact on business
- ▶ Risk management to address climate-related issues
- ▶ Disclosure of emission reduction targets and use of carbon offsets
- ▶ Value chain emissions disclosure and associated emission reduction targets

For the Barometer, companies were assessed on how they are disclosing against their transition plan and decarbonization strategy. As part of the shift from TCFD to ISSB, standard-setters have identified the need for companies to design, publish and update their transition plan as a key focus.

Some companies have disclosed time horizon-aligned targets, with certain key actions detailed, such as emission reduction, development of lower-carbon products, and use of alternative fuels. A few have disclosed details around the use of carbon offset techniques, collaboration with stakeholders, and partnerships with agencies and bodies for voluntary methane reduction.



of companies have identified and reported against different climate related opportunity types categorised by TCFD recommendations

Despite this progress, there is a rising sense of urgency about the lack of concrete steps being taken to achieve genuine transition. While it is fair to say that many companies are extensively disclosing their long-term net zero targets, we still see limited action from companies in terms of how they plan to achieve net zero, or progress to date on the commitments they have made.

How the TPT leads the way on Transition Planning

The TPT was launched by the UK Government in 2022 to develop a gold standard for private-sector climate transition plans. On 9 October 2023, the TPT published the finalized version of its disclosure framework, which is intended to help companies develop, disclose, and deliver robust and credible climate transition plans.

Opportunity knocks

It is encouraging to see 68% of companies now reporting on the opportunities presented by the transition to a low-carbon economy. This year's Barometer was consistent with 2022 in terms of the opportunities being identified. The leading category of focus is the opportunity to innovate new products and services (52%, unchanged from 2022). Elsewhere, 34% of companies identify resource efficiency as an area of opportunity, with energy sourcing at 31%. One in four companies say they are focused on new market opportunities, a small increase on 22% in 2022.

Furthermore, the TPT provided supporting guidance, including on how the framework relates to other key standards. The TPT framework has been designed with interoperability and additionality in mind, building on the foundations already established by the ISSB and the Glasgow Financial Alliance for Net Zero (GFANZ). The TPT considers its recommendations to be a key source of guidance to companies reporting on their transition plans under TCFD, IFRS S2 and other frameworks.

The UK financial regulator, the Financial Conduct Authority (FCA), recognizes the relationship between the ISSB and TPT frameworks.⁴⁸ As such, it will consult on introducing guidance aligned with the TPT's framework as part of the IFRS S1 and S2 adoption consultation. The FCA aims to finalize a policy position by the end of 2024, with a view to bringing new requirements into force for accounting periods beginning on or after 1 January 2025, for reporting to begin in 2026.

Transition planning can reveal both gaps and significant opportunities for companies that engage in this process.⁴⁹ Businesses that are looking to drive organization-wide alignment to deliver their strategic ambition can follow the TPT's approach to transition planning, which is centered around the three guiding principles of ambition, action and accountability.

⁴⁸ "FCA welcomes the launch of the Transition Plan Taskforce Disclosure Framework", <https://www.fca.org.uk/news/news-stories/fca-welcomes-launch-transition-plan-taskforce-disclosure-framework>

⁴⁹ "UK Finalises Transition Plan Taskforce Disclosures Framework", <https://www.regulationasia.com/uk-finalises-transition-plan-taskforce-disclosures-framework>

A call to action

This year's Barometer offers much encouragement in terms of the overall direction of travel when it comes to climate risk. There has been positive movement in terms of the quality and coverage of reporting. Most sectors have made progress and companies are investing time and energy into engaging with new regulations. But the overall picture remains concerning.

The direction might be right, but the pace and intensity are surely lacking. Across markets and sectors, leaders and laggards, there must be a greater sense of urgency.

The direction might be right, but the pace and intensity are surely lacking. A greater sense of urgency is needed across markets and sectors, for both leaders and laggards. And, while we rightly celebrate big rises in certain statistics year on year, for many markets and sectors the improvement comes from a worryingly low baseline.

For real progress to happen, companies should urgently take these three core actions:

1. Shift the mindset from burden to opportunity

If companies only think about reporting in terms of a compliance obligation, then reporting will always seem like a burden. Unless that compliance mindset changes, the drive toward better disclosure will continue to be framed in terms of budget for disclosures versus budget for impact. In the best-scoring companies, climate disclosure is used to identify where a business will thrive and drive the behaviors needed to achieve success. Where we see detailed, coherent and measurable data in disclosures, it is typically matched in the rigor and energy around strategy and action.

This is the most pressing priority. Reporting must be used to drive impact and for this to happen, there needs to be a genuine change in leadership and culture at the appropriate levels of an organization. When companies approach climate reporting from a business intelligence and strategic viewpoint, the cost can suddenly seem very reasonable. Proactive and responsible reporting and disclosure should then follow as a natural consequence.

So, now is the time to look beyond compliance. A business with a sustainable future will embrace the transition to a low-carbon economy rather than just tick a box. It will recognize that leading on decarbonization and taking advantage of opportunities as they arise is critical to its ongoing success.

2. Master the data to transform for a low-carbon future

As progress is more urgently sought, companies must move beyond the simple collection and analysis of data to inform disclosure requirements. Instead, they should use data to drive action, as well as reduce emissions. Indeed, by using data in more effective ways, companies are more likely to identify opportunities as new markets open up and existing markets evolve. This approach requires companies to establish the right governance structures to harness and manage data so that it is integrated into strategic and operational risk management.

Companies that build confidence in their data will empower their internal teams to make bolder and more strategic efforts, backed up by empirical evidence. They will also encourage external stakeholders to view the entity as one that has a clear view of its risks and opportunities over the coming years. Climate data and reporting should no longer be seen as a separate and discrete product of business operations. Rather, it should be seamlessly embedded as a driver of operational and strategic decisions.

3. Elevate the agenda to drive impact

Companies that haven't already broadened out the task of understanding and reporting on climate-related factors beyond sustainability professionals should do so now. If they are to inform the overall business strategy, data and related impacts need to be addressed at the board level. This, in turn, will allow leaders to take a holistic approach to transformation, encompassing operations, people, supply chain and technology.

Leaders have a responsibility to truly understand where the business is on its decarbonization journey, and where the risks and opportunities lie - at all times. It is no longer sufficient to hand this responsibility to the sustainability team, who take over and tick the right boxes on disclosure and beyond. Leaders have the power to effect real change, so they should now take a more holistic approach to stakeholder engagement, to improve confidence with management internally and investors externally. Ultimately, this represents an opportunity for leaders to engage teams that might not have typically been included in the discussion, but can add enormous value and insight.

Today, we are at a crucial moment in history. Leaders have an opportunity to go beyond political short-termism and basic compliance and adopt the decarbonization and transition agenda as a driver of future strategy. That will require resourcefulness, courage, hard work and difficult decisions. But there is no alternative.

Understanding nature loss

The climate risk agenda is multi-faceted. One of the most visible items on the agenda is the connection between climate change and nature and biodiversity loss. The emergence of the nature-positive agenda highlights that there is no net-zero world that is not also “nature positive”. Adopting a nature-positive approach will help companies to align with global net zero emissions by 2050 and will be necessary to fulfil the climate ambitions of the 2015 Paris Agreement.

Climate change and nature loss are inextricably entwined in that they mutually exacerbate one another. Climate systems are a subset of broader natural systems, and climate change is one of five direct drivers of nature loss. What’s more, climate change and nature and biodiversity loss share many of the same indirect drivers. These include demographic changes, human consumption, energy demand, trade and technology. They are also negatively impacted by the prevalence of the other.

So, there are clear similarities between the climate challenge and the nature and biodiversity challenge. These similarities, along with the significant progress made in understanding and managing climate risk over the last decade, should enable companies and investors alike to use their existing approach toward climate change to kick-start action that addresses biodiversity loss.

It is worth noting, however, that there are some key differences between climate change and nature and biodiversity loss that are especially pertinent in the disclosure discussion. In particular, nature and biodiversity currently lack a universal metric for impact, unlike climate change (which has the metric carbon dioxide equivalent or CO₂-e). They also lack a commonly accepted pricing approach, with no equivalent to a carbon price or social cost of carbon.

Furthermore, there are not yet any widely used scenarios to undertake assessments of potential future states, which are a key component of climate risk and opportunity assessments. Finally, while there are readily available mechanisms for market valuation of assets with significant impact on GHG emissions, there are no similar mechanisms for identifying and valuing assets with significant biodiversity impacts.

These differences matter. Unlike climate change, there may never be a universal metric for biodiversity. Given the multidimensional nature of biodiversity, it is more appropriate to work toward the development of a standardized and agreed set of indicators, metrics, and indices (rather than a single, universal metric). While the development of these indicators, metrics and indices will support investor understanding, they will take time to emerge. In the meantime, investors should not wait to act.

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Adopting a nature-positive approach will help companies to align with global net zero emissions by 2050 and will be necessary to fulfil the climate ambitions of the 2015 Paris Agreement.



About this research

The Fifth Edition of the EY Global Climate Risk Barometer includes analysis on 1,536 companies from 13 TCFD-aligned sectors (both financial and nonfinancial) across 51 countries.

The 2023 Barometer analyzes the extent to which companies have built on the TCFD framework to prepare for the introduction of new regulations surrounding the disclosure of climate-related risks and opportunities through their reporting processes.

The Barometer provides an annual overview of the alignment of organizations' climate-related risk disclosures, with 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 2023 Barometer analyzes the extent to which companies have built on the TCFD framework to prepare for the introduction of new regulations surrounding the disclosure of climate-related risks and opportunities through their reporting processes. It draws on public disclosures produced during the 2022 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 1,536 companies (the largest by market capitalization) across 13 exposed sectors in 51 jurisdictions were included in the assessment, broadening the size and geographical scope from 2022. In addition, the scoring matrix for the Barometer has been evolved and refined since last year to become even

more detailed and robust. Companies were scored through a multi-tiered system that included both the coverage and quality of the TCFD recommendations.

This year's Barometer builds on previous research and incorporates several new elements, particularly those concerned with organizations' readiness for the introduction of ISSB S2. In particular, it captures:

- ▶ Companies' readiness to comply with IFRS S2 disclosure requirements.
- ▶ Disclosure around transition plans.
- ▶ Disclosure of financial impact due to climate change in financial statements/reports. This was achieved by incorporating additional questions emerging out of additional disclosure requirements under ISSB, as well as enhancing existing ones to focus on incremental themes.

These aspects were examined in the context of:

- ▶ Increasing regulatory pressure and the emergence of ISSB.
- ▶ Increasing concerns from various stakeholders to evaluate how tangible the climate targets disclosed by the companies are and whether they are actually moving toward net-zero.
- ▶ The increasing requirement to understand climate impact on a company's operations.

Scoring

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

Coverage

Companies were assigned a percentage score 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 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).

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

- 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

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This year may end up being viewed as a pivotal period in the world's journey toward decarbonizing the economic system.

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