

If climate disclosures are improving, why isn't decarbonization accelerating?



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Foreword

This third EY Global Climate Risk Disclosure Barometer provides a global snapshot of the increasing corporate focus on climate risks and opportunities as pressure from all stakeholders moves them up the boardroom and executive agenda.

The research draws on public disclosures of companies on the uptake of the Task Force on Climate-related Financial Disclosures (TCFD) across highly impacted sectors. The disclosures of more than 1,100 companies across 42 jurisdictions were included in the assessment, broadening the size and geographical scope of the sample from the 2019 research.

Although the findings demonstrate progress in terms of the coverage and quality of climate disclosures, they also highlight an urgent need for companies to take a broader view of both their physical and transition climate risks, and the opportunities that responding to these risks may present.

For directors and business leaders, climate risk and opportunities can be more than a reporting or disclosure matter. At a time when political will and global public opinion are focused on profound climate action, climate risks and opportunities should be front and center as organizations plan their future growth strategies.

Climate change and the gravity of the climate crisis can be fundamentally important to an organization's business models, strategies, principal risks and opportunities – the very viability of their organizations and their industries may be at risk.

In particular, organizations should understand that Scope 1 and 2 emissions are unlikely to be the only source of their climate risk factors, especially because Scope 1 and 2 emissions have no bearing on exposure to physical climate risk. Organizations should look up and down their entire value chain to identify vulnerabilities and opportunities for growth, and find – and use – their most powerful climate management levers to build organizational value.

At the same time, net-zero commitments should broaden from an individual organization to an industry view. An organization with a narrow focus may get to net-zero only to discover parts of its value chain have no place in a decarbonized economy. The transition risk conversation must extend to a whole industry view, emphasizing the importance of understanding the resilience of business strategies and assets under a range of possible climate scenarios.

Finally, organizations should seek a clear value narrative around their disclosures and carbon commitments. To become a foundation of strategy, decarbonization efforts must demonstrate value and make commercial sense.

This report is not only a barometer of climate risks and opportunities disclosures but also a call to action to accelerate the development and implementation of climate strategy. It is hoped the report will catalyze meaningful scenario analysis and widespread strategy adaptation as businesses better understand the risks and opportunities that physical and transition risks are likely to create in their organizations and industries.



A handwritten signature in black ink, appearing to read 'Mathew Nelson'.

Mathew Nelson

EY Global Climate Change and Sustainability
Services (CCaSS) Leader

1 Key findings

In line with previous results, coverage of disclosures remains ahead of quality, with an average coverage of 70% of the TCFD recommendations across 1100+ companies.

Despite ongoing progress, companies are still struggling to get to grips with climate risk disclosure

Companies have continued to make progress in addressing the quality and coverage of climate-related financial disclosures, driven by more regulators making TCFD reporting mandatory, pressure from investors, and the fact that the annual CDP response now incorporates TCFD recommendations.

When the 2019 EY Global Climate Risk Disclosure Barometer was released, only France had legislated TCFD reporting – and only for certain elements. Since then, the UK, New Zealand and Japan have adopted disclosure legislation. Central banks of some of the largest and most important global financial hubs also now

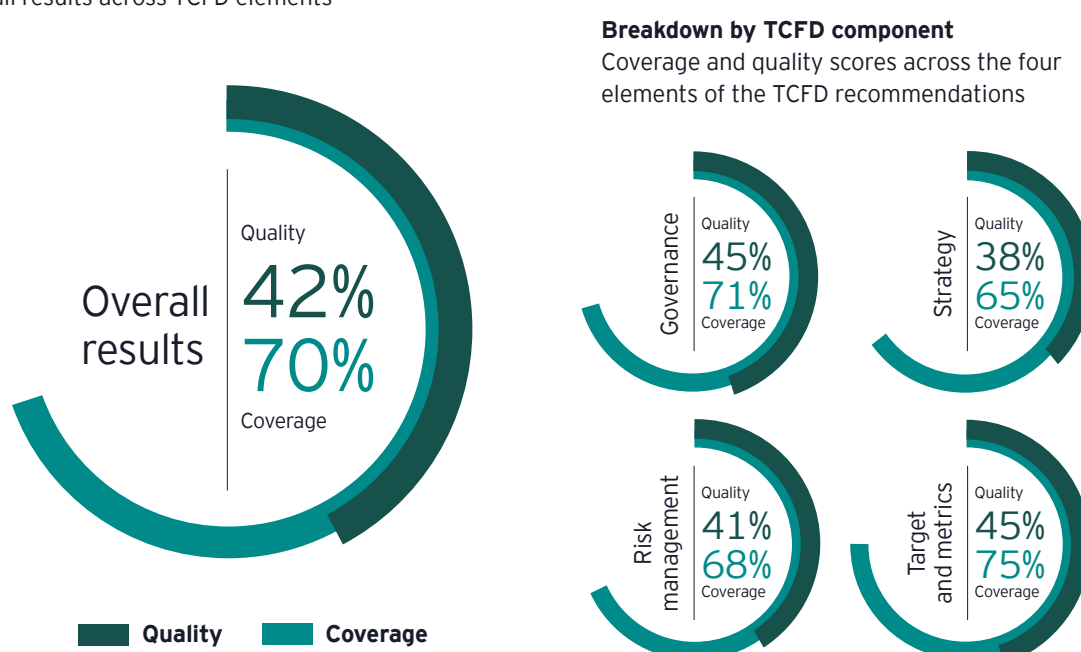
view climate risks as materially important to their economies. More comprehensive legislation that mandates climate risk assessment and disclosure is anticipated, especially in the US, the EU and Japan.

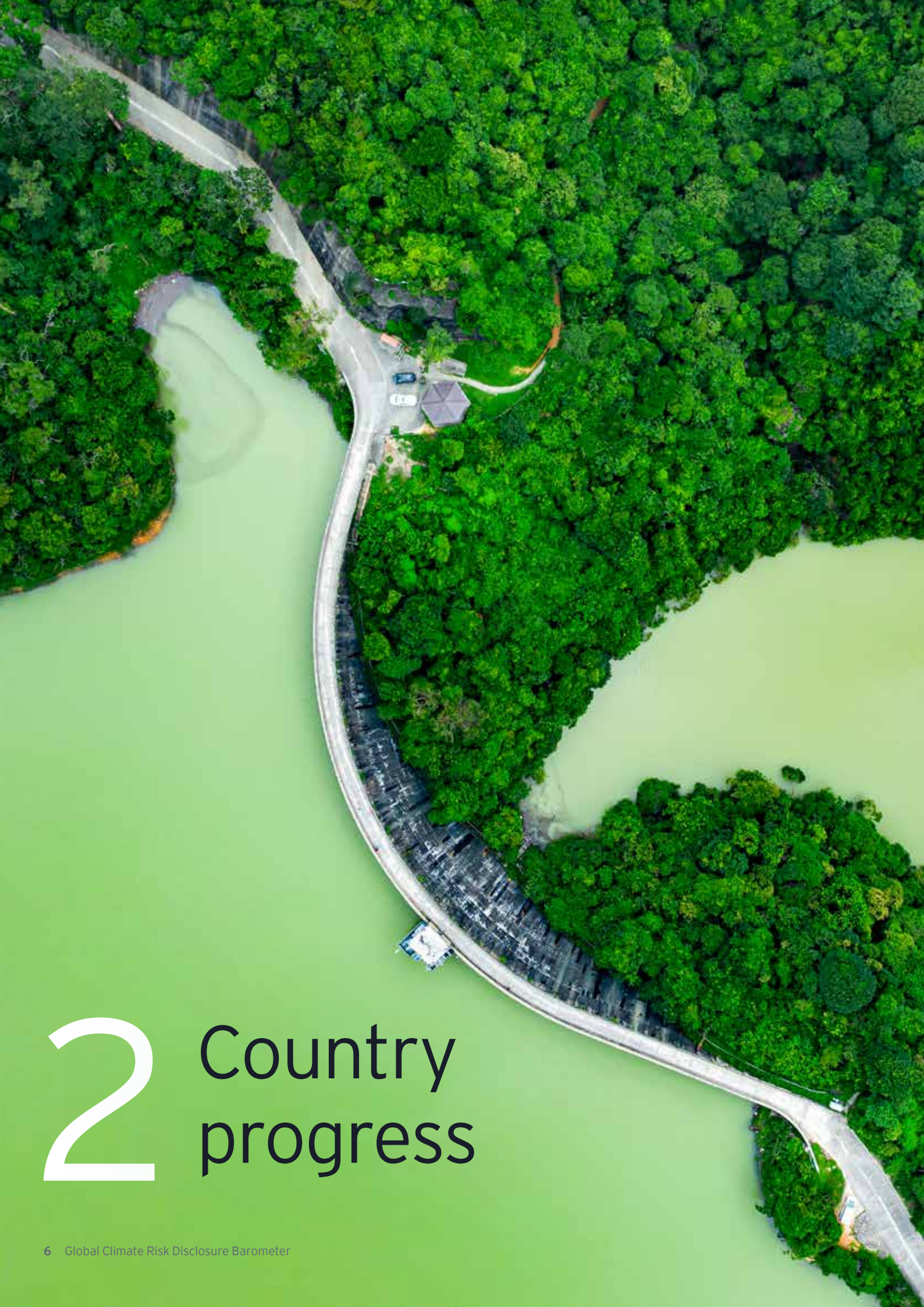
In addition, global investors have publicly supported the recommendations, also contributing to an early uptake of disclosures. The increasing level of shareholder activism is driving companies that operate in high-risk sectors to pay closer attention to their disclosures and to align themselves with the recommendations. In line with previous results, coverage of disclosures remains ahead of quality, with an average coverage of 70% of the TCFD recommendations across 1100+ companies. However, the average quality score was only 42% of the maximum possible score across the 11 recommendations. Almost 50%

of companies have 100% coverage, but only 3% received a score of 100% quality – clearly demonstrating room for improvement. The data indicates that while more companies are indeed reporting on climate-related risks and opportunities, they may be doing so as a “tick box” exercise.

Not surprisingly, the results show that across the TCFD elements, on average, companies reported better on governance compared with disclosures relating to strategy and risk management. But interestingly, targets and metrics was also higher, which may indicate that companies either feel more comfortable disclosing what they are trying to achieve and less on how to get there, or perhaps there is a trend for companies looking to set aspirational targets in advance of having a clear pathway to achieve the goals.

Figure 1: Overall results across TCFD elements

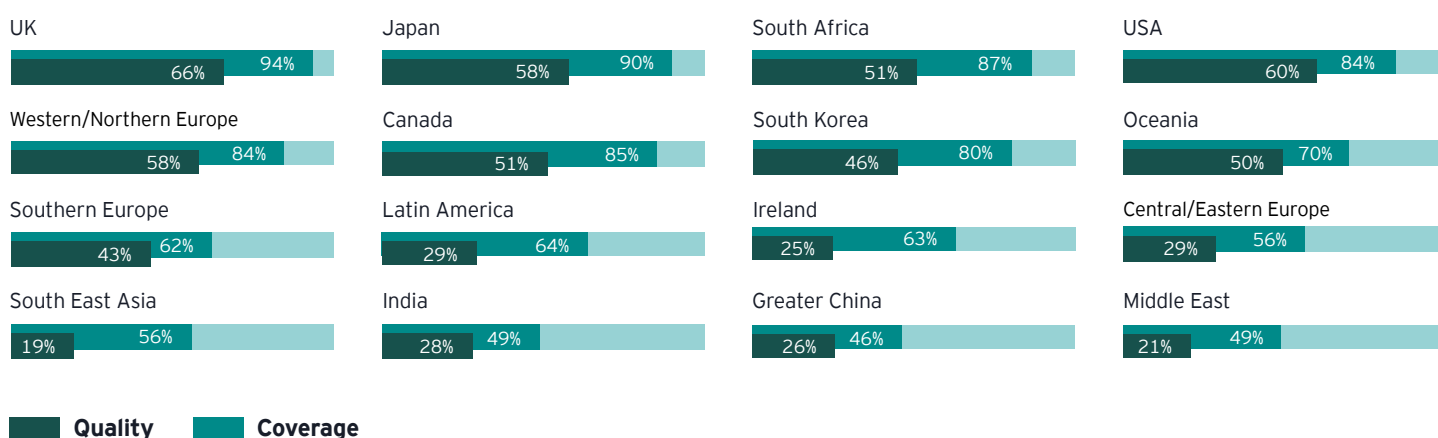




2 Country progress

In general, the most advanced reporting is in countries leading the way with strong climate disclosure regulations and clear policy signals. However, even in geographies less engaged in the climate debate, investor pressure has driven progress.

Figure 2: Results by market



The highest- and lowest-performing markets have not changed significantly from previous years. On average, higher coverage scores for companies continue to be linked to the maturity of the markets where governments, shareholders, investors and local market regulators are active.

This includes companies in countries such as:

- UK
- Europe (in particular, France and Germany)
- US
- Australia
- South Africa
- Japan

Companies based in the UK presented the highest score on quality of disclosures, with an average of 67% (vs. 40% on average) – a significant year-on-year improvement with an increase of more than 28 points compared with 2019. This can be attributed to companies preparing in advance of TCFD reporting becoming mandatory across the UK economy.

In Europe, the US, Oceania, Japan and South Africa, the higher maturity of reporting reflects the increasing involvement of local market authorities and prudential regulators signaling their expectations regarding climate-risk management and disclosures.

The lowest performing markets include:

- China (in particular, Mainland China)
- South America
- South East Asia

This likely reflects the lack of focus on climate risks and opportunities by companies and market regulators in these countries, despite the relatively high-carbon intensity of their economies.

In terms of quality, the gap between the highest- and lowest-performing markets remains high – around 50 points. This reflects the continued progress made by companies operating in climate-mature markets since the TCFD recommendations were implemented. In addition, the alignment of the CDP questionnaire to certain elements of the TCFD has helped companies with long-standing CDP reporting practices to better explain the impacts of climate risks and opportunities.

United States

The US continues to be a top performer, although results have plateaued after the increase seen in the 2019 EY Global Climate Risk Disclosure Barometer results, when US companies started responding to the climate change issue. The US has seen a surge in companies issuing their first climate risk disclosure and TCFD reporting in the wake of the BlackRock and State Street CEO letters urging portfolio companies to report on climate risk. Investor and stakeholder pressure to manage and disclose material environmental, social and governance (ESG) and climate risks and opportunities has spread beyond the most carbon-intensive sectors, leading to advances in the quality of reporting in sectors such as agriculture, food and forest products, manufacturing, retail, health and consumer goods, and telecommunications and technology.

Canada

In Canada, the quality of climate risk disclosures is improving, driven by a marked rise in investor interest in ESG, Federal Government support for the TCFD recommendations, and an active group of asset owners calling for better disclosures.

Latin America

Brazil is a high performer within the Latin American region thanks to the strong role of its financial sector in driving the country's climate agenda. This is likely to continue, particularly given that the central bank of Brazil has put a TCFD-inspired rule to regulate climate risk disclosure into public consultation for implementation by 2030.

Europe

In Europe, where carbon regulation is very mature, reporting quality and coverage are at high levels, also driven by growing investor and stakeholder pressure. France continues to be a high performer, reflecting that, prior to 2019, it was the only country with disclosure of climate change risks codified into law within the EU. In 2020, increasing numbers of companies began experimenting with internal carbon pricing and using scenario planning to future-proof their strategies in a low-carbon economy. Heavy emitters are progressing with decarbonization plans, and consumer brands have announced ambitious reduction targets.

United Kingdom

In the UK, which has been leading the drive to transparency on climate risk, the research revealed a step-change in disclosures, with many organizations setting themselves net-zero targets. Coverage is near universal after TCFD reporting was made mandatory across the UK economy in all sectors, including unlisted entities. However, despite the broad coverage of reporting, UK businesses are challenged by the TCFD's requirement to undertake scenario analysis. Metrics and targets also remain an area requiring further development. With a significant portion of the UK's mandatory requirements in place by 2023 – and TCFD-aligned disclosures mandatory across the economy by 2025 – the quality of reporting to be driven up is expected to improve even further.

Ireland

Although reporting coverage in Ireland continues to expand rapidly, quality remains low. This is expected to improve in the next year following government support for companies adopting the TCFD recommendations.

Middle East

In the Middle East, while quality and coverage improved, reporting remains well below global averages but is expected to improve rapidly.

India

In India, both coverage and quality of reporting remain below global averages. However, the number of Indian companies responding to disclosure platforms such as CDP is increasing. 2020 was the first year Indian companies featured on the CDP A List. In November 2020, 24 Indian companies signed a pledge to work with the Government toward achieving the 2015 United Nations Paris Climate Change Conference (Paris Agreement) goals, as part of the India CEO Forum on Climate Change. In the coming year, greater TCFD reporting is expected driven by pressure from financiers, investors and customers.

South Africa

South Africa remains ahead of global averages, led by the mining industry, where reporting is surging ahead of regulation.

Greater China

Greater China's performance has improved overall, particularly in Hong Kong, where more ESG-leading companies were added to the assessment scope. Increased reporting was also driven by revised ESG listing rules by regulators with new disclosure requirements on climate-related risk, which came into effect on 1 July 2020. Compared with the previous dataset, these companies are responding more actively to various ESG trends, including climate change.

South East Asia

In Southeast Asia, although regulators are preferencing the TCFD recommendations, many companies are still in the early days of reporting.

South Korea

In South Korea, while quality and coverage progressed, reporting remains well below global averages but is expected to improve, possibly driven by peers from neighboring countries (e.g., Japan) moving quickly to improve disclosures.

Japan

On average, Japanese companies are improving climate disclosures, spurred perhaps by the creation of the public-private TCFD consortium in 2019, which has backing from the Japanese Ministry of Economy, Trade and Industry (METI), its Ministry of the Environment and the Financial Services Agency, the country's financial regulator. Since the Japanese Government announced its ambitions to become carbon neutral in 2050, stakeholders are paying more attention to companies' responses to climate risks and opportunities and disclosure. As the S&P Japan 500 ESG Index draws increasing attention from investors, companies are realizing that improving climate-related disclosures is important to enhance their evaluation.

Oceania

In Oceania, Australia continues to perform well, led by the mining industry and increased regulatory pressure, such as a joint bulletin on assessing financial statement materiality for climate-related risk disclosures by the Australian Accounting Standards Board and the Auditing and Assurance Standards Board, and new legal opinion that superannuation funds must divest from assets with a high degree of climate risk or face breaching their members' best interests duties.

In New Zealand, the 2020 announcement of new requirements for mandatory disclosures of climate-related risks for companies and financial institutions – which will come into effect in 2023 – is expected to drive improvement in both coverage and quality in coming years.

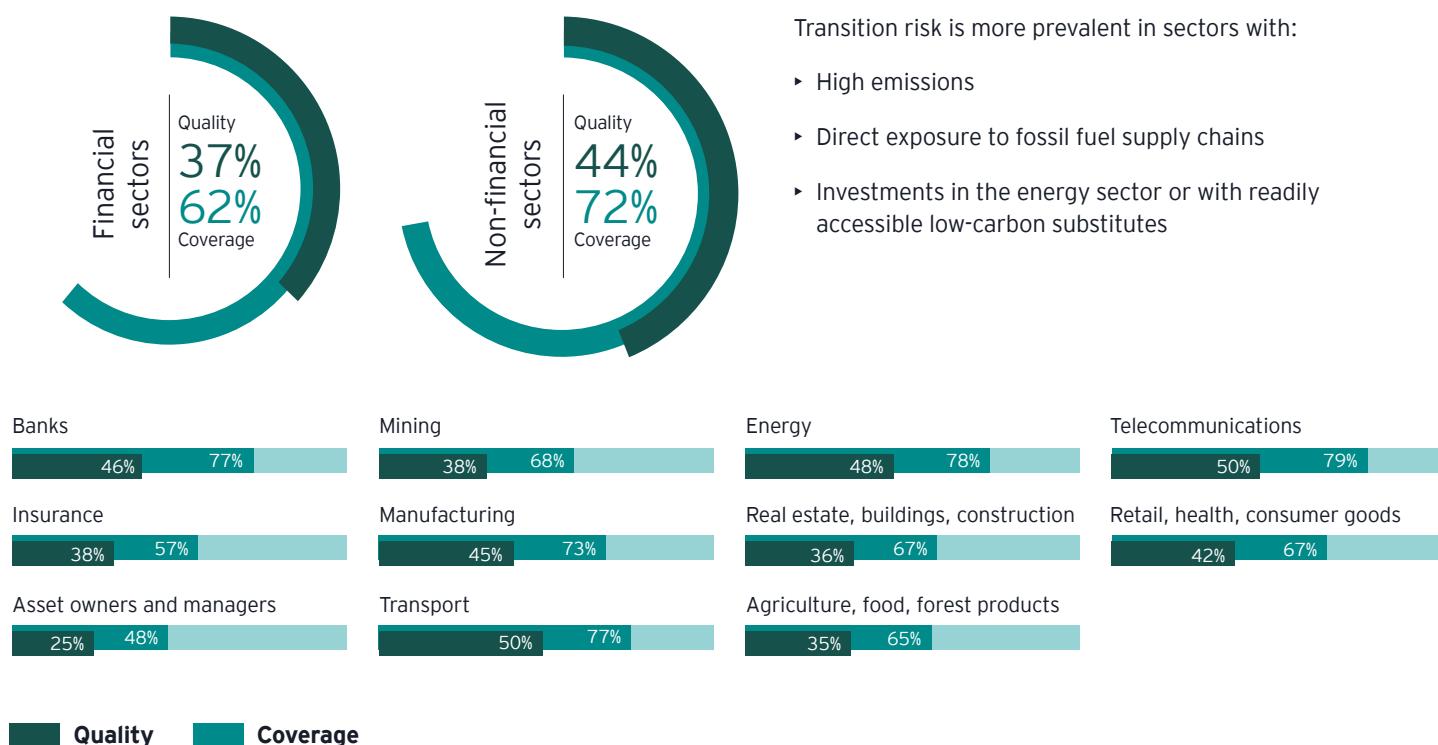


3 Industry progress

Sectors with the most significant exposure to transition risk generally scored higher for their disclosures.

As expected, sectors with the most significant exposure to transition risk generally scored higher for their disclosures. These include banks, energy, manufacturing, telecommunications and technology, and transportation.

Figure 3: Results by sector



Institutions are implementing enterprise-wide initiatives to both address portfolio-based climate risks and seize multiple climate change opportunities.

Spotlight on financial services

In the financial services sector, banks continue to lead, with asset owners and managers still well below the average. In many cases, asset owners are not required to report publicly – nor do the vast majority of asset managers.

Given the implications of climate change for systemic financial stability, 2020 witnessed a plethora of far-reaching regulatory overhauls in relation to climate change in financial services. Institutions also made bold voluntary commitments in a drive to gain a competitive advantage in an increasingly crowded industry landscape – transforming their investment strategies, the services they offer and the way they engage with customers.

Institutions are implementing enterprise-wide initiatives to both address portfolio-based climate risks

and seize multiple climate change opportunities. These range from financing climate transition programs (investing in the green and helping the brown to transition) to developing new green financial products – including green mortgages for properties that meet certain environmental standards – for a fast-growing consumer mass market.

Given the number and range of these initiatives, ensuring a joined-up approach can be critical. While institutions now realize climate change can be an enterprise-wide challenge, programs are not yet fully integrated. At the business unit level – especially around the opportunity side – programs tend to work independently. Specialist teams such as credit risk are also often making decisions that don't take into account the broader picture. Institutions should recognize the considerable overlap between the data used for risk management, product development,

and the institution's own disclosures and reporting – and stop siloed projects from developing their own data sources.

Institutions should also address the growing regulatory concern about the lack of appropriate information and advice to help consumers really understand the “greenness” of new products and make an informed decision. Addressing the heightened risk of mis-selling, misleading disclosure or “greenwashing” should be an ongoing imperative.

Another challenge is to effectively use scenario modeling to stress test loan, underwriting and investment books across physical and transition risks, and via different transition pathways. Many institutions are already walking down this path but struggling to understand counterparty risk in the form of the emissions of their investments. With notable exceptions, scenario modeling capability remains in its early stages.

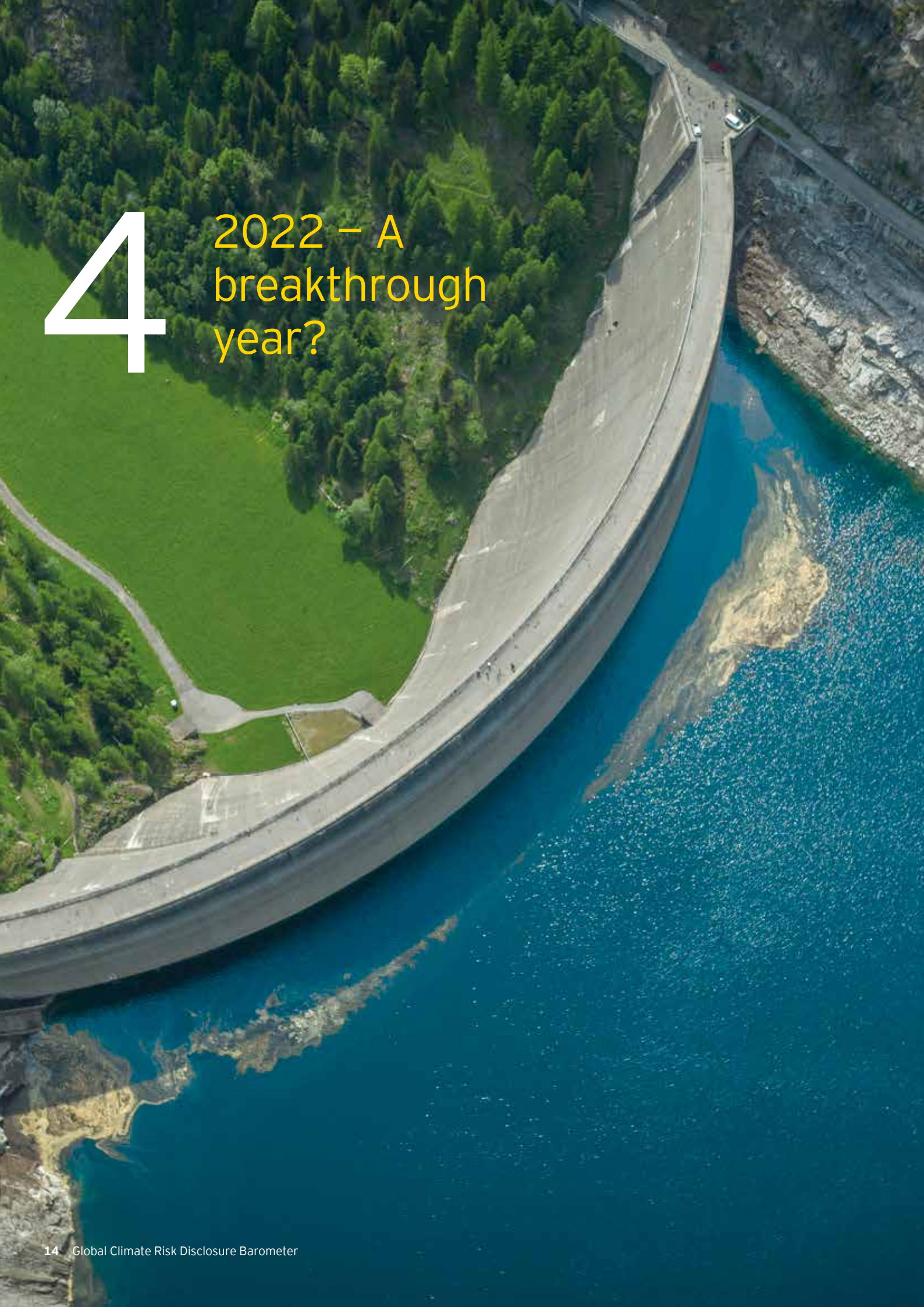
CASE STUDY

Reducing the emissions that a bank finances

Barclays, one of the world's largest banks, is already at net-zero in its own operations. Its new focus is on reducing the client emissions it finances. Barclays aims to align its financing with the Paris Agreement across lending and capital markets. Its strategy is to use a proprietary methodology, BlueTrack™, to measure financed emissions, track them against a decreasing carbon limit, and benchmark emissions levels and publish progress on a public climate dashboard.¹

¹ “Our climate dashboard.”, Barclays, <https://home.barclays/society/our-position-on-climate-change/our-climate-dashboard/>, accessed January 2021.

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An aerial photograph of a large, curved concrete dam. The dam is situated in a valley, with a lush green forest on the left and a deep blue reservoir on the right. The water in the reservoir is a vibrant blue, contrasting with the green of the forest and the grey of the dam. The dam's structure is prominent, curving from the bottom left towards the top right. The overall scene is a mix of natural beauty and human engineering.

4

2022 – A
breakthrough
year?

Scoring may get harder as regulators push organizations to make more detailed and broader-ranging disclosures, and expectations increase for more sophisticated content in the reports, such as the outcomes of quantitative analysis, discussions on financial impacts under different scenarios and the potential for asset impairment.

Despite the considerable progress made in 2020, the scene is set for a dramatic uptick in climate-related financial disclosures. A number of forces are converging to accelerate business action to tackle climate change, including strong signals from regulators and big societal expectations.

The COVID-19 pandemic has also acted as an accelerator. It has been a wake-up call to governments, businesses and consumers, illustrating the requirement for government intervention in times of crisis, the urgency for businesses to better prepare for disaster and the importance of listening to the science. It has also catalyzed the building of green infrastructure, with large percentages of recovery packages being invested in industrial decarbonization projects.

Increasing regulation

With some 120 countries committing to achieving net-zero emissions by 2050², regulators around the world are pushing through mandates that make climate change mitigation central to listed corporations' due care and diligence, with the TCFD recommendations now the clear preferred disclosure framework. Europe is leading the way, with the 2020 adoption of the EU Taxonomy Regulation, supplementing the rules and increasing

the granularity and transparency of sustainability-related disclosures. Soon, regulation may not only mandate disclosure of climate-related information, risks and performance, but also demand this data is incorporated within financial filings. Eventually, as has already occurred in the UK, mandatory climate-related financial reporting is expected to expand to a broader set of entities, including all sectors and unlisted companies. Stronger disclosure requirements may lead to a more accurate reflection of climate-related risks and opportunities, enabling investors to make more informed capital allocations.

Mandating the disclosure of climate-related risks and opportunities may also bring with it the system-wide benefit of encouraging entities to apply a more rigorous process to the ramifications of transitioning to net-zero. However, organizations with high quality and coverage scores in this year's research should be aware that scoring may get harder as regulators push organizations to make more

detailed and broader-ranging disclosures, and expectations increase for more sophisticated content in the reports, such as the outcomes of quantitative analysis, discussions on financial impacts under different scenarios and the potential for asset impairment.

Access to capital requirements

Regulation may be increasing, but the capital markets are moving even faster, setting the pace of change to improve climate change disclosures. The 2020 EY Global Institutional Investor Survey³ found two-thirds of investors are making significant use of ESG disclosures that use the TCFD framework. Climate-related disclosures, as recommended by the TCFD, were cited as the most valuable ESG disclosure framework. Feedback also suggested that investors may increasingly expect companies to take a robust approach and be less accepting of

² "Race To Zero Campaign", United Nations Climate Change, March 2021, <https://unfccc.int/climate-action/race-to-zero-campaign#eq-6>.

³ How will ESG performance shape your future?, EY, 2020.

64%

64% of people consider the climate crisis a global emergency.⁴

“light-touch disclosures.” Already, investors are expecting businesses to adopt Paris Agreement emissions targets and commit to climate action that includes hitting net-zero by 2050. The expectation is for companies to calculate and fully disclose what physical and financial risks climate change poses to their assets – and have a credible plan to protect value in an energy transition. Some investment firms are requesting transition path information from investee organizations, as they seek to understand their net-zero ambition and potentially measure progress against five-year commitments year on year. The writing is on the wall. If companies don’t have their house in order on climate risk, including a clear strategic path to successful operation in a low-carbon environment, capital may rapidly disappear.

Customers and talent

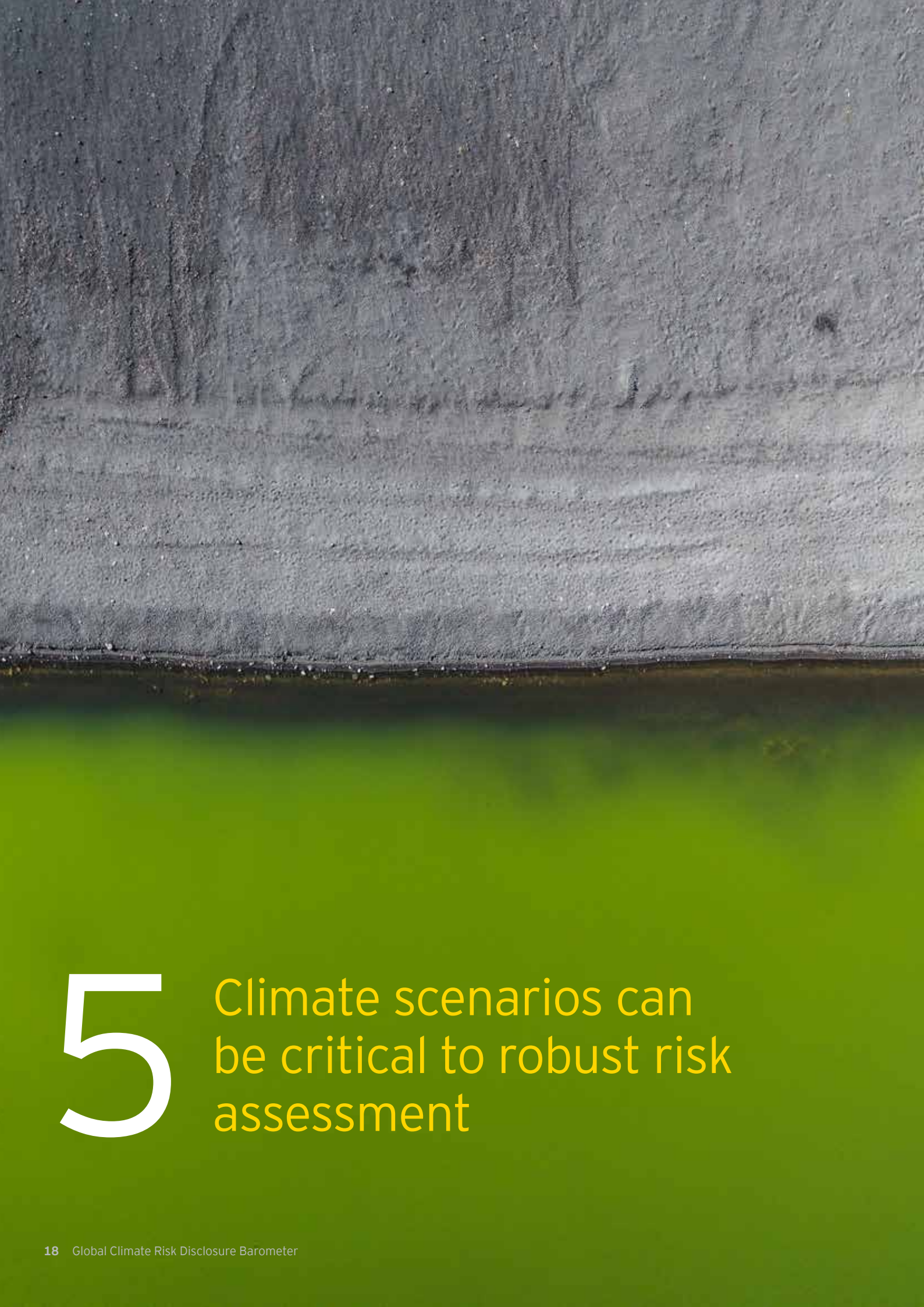
Capital markets are not the only stakeholders putting businesses under pressure to take action on climate change. It’s now unequivocal that most people around the world want action. In late 2020, the largest ever global opinion survey on climate change, the Peoples’ Climate Vote,⁵ found that 64% of people consider the climate crisis a “global emergency.” Consumers are making purpose-driven decisions when selecting brands and applying for jobs, seeking out lower-carbon footprint options from companies with a carbon conscience.

⁴ “Peoples’ Climate Vote”, United Nations Development Programme, University of Oxford, 2021.

⁵ “Ibid”

The expectation is for companies to calculate and fully disclose what physical and financial risks climate change poses to their assets.





5

Climate scenarios can
be critical to robust risk
assessment

Because climate-related risks are inherently more complex and long term than most traditional business risks, scenario analysis is essential for organizations to understand the physical, economic and regulatory connection between future climate impacts and business and supply chain activities.

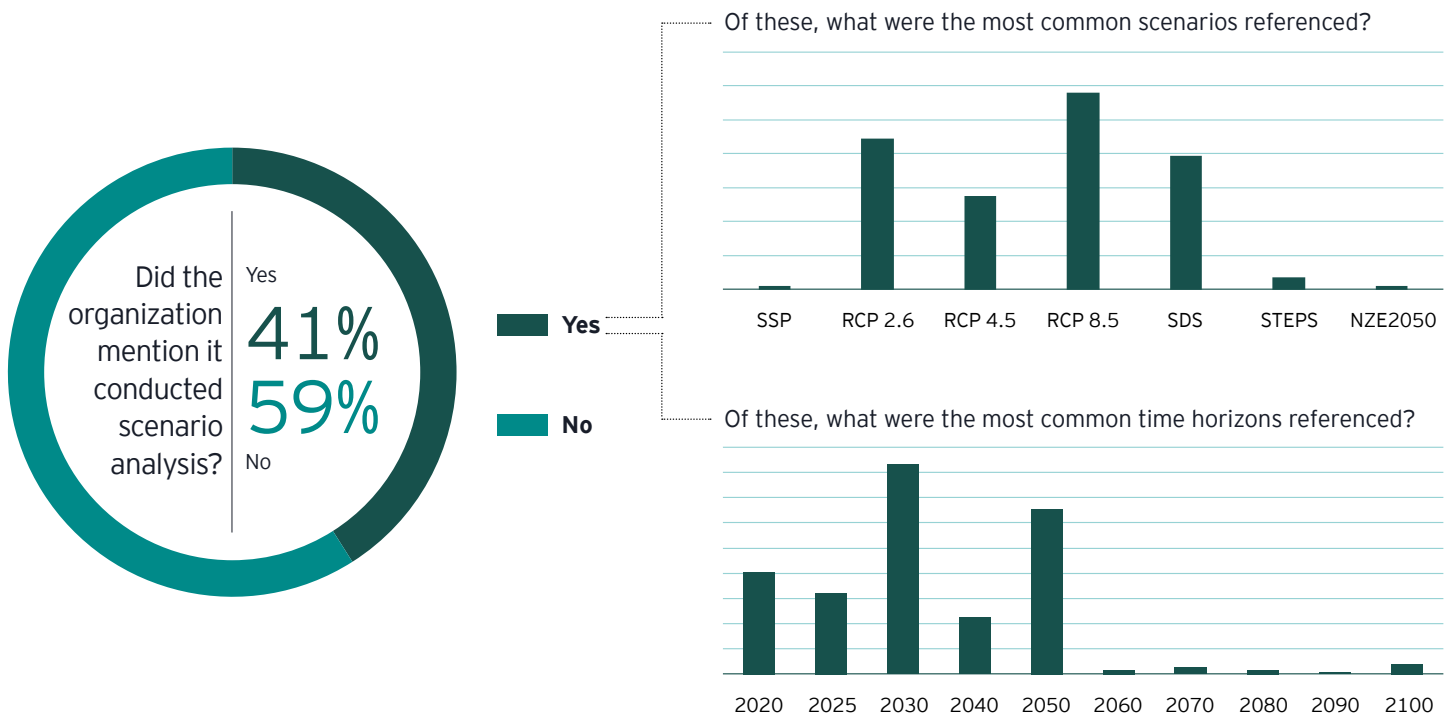
The research shows only 41% of companies in the study conducted scenario analysis. While scenario analysis is more complex than other elements of disclosure, it is perhaps the most important aspect of the TCFD framework as it turns theory into tangible, actionable strategies. Scenario analysis can be complex, but the benefits of conducting it, and accurately reflecting

climate-related risks and opportunities, far outweigh the effort.

This is clearly the view of regulators and advisory bodies. 2020 saw an increase in scenario guidance from the Intergovernmental Panel on Climate Change (IPCC),⁶ central banks via the Network of Central Banks and Supervisors

for Greening the Financial System (NGFS)⁷ and even market and prudential regulators. In the future, regulators and capital markets will be unlikely to accept that companies have performed an accurate risk or opportunity assessment without carrying out a robust level of scenario analysis.

Figure 4: The research shows a large variation in approaches to scenario analysis



⁶ Riahi, Keywan. "The Shared Socioeconomic Pathways and Their Energy, Land Use, and Greenhouse Gas Emissions Implications: An Overview." Science Direct, Jan. 2017, www.sciencedirect.com/science/article/pii/S0959378016300681.

⁷ "NGFS climate scenarios for central banks and supervisors," NGFS, 25 June 2021, <https://www.ngfs.net/en/communique-de-presse/ngfs-publishes-second-vintage-climate-scenarios-forward-looking-climate-risks-assessment>.

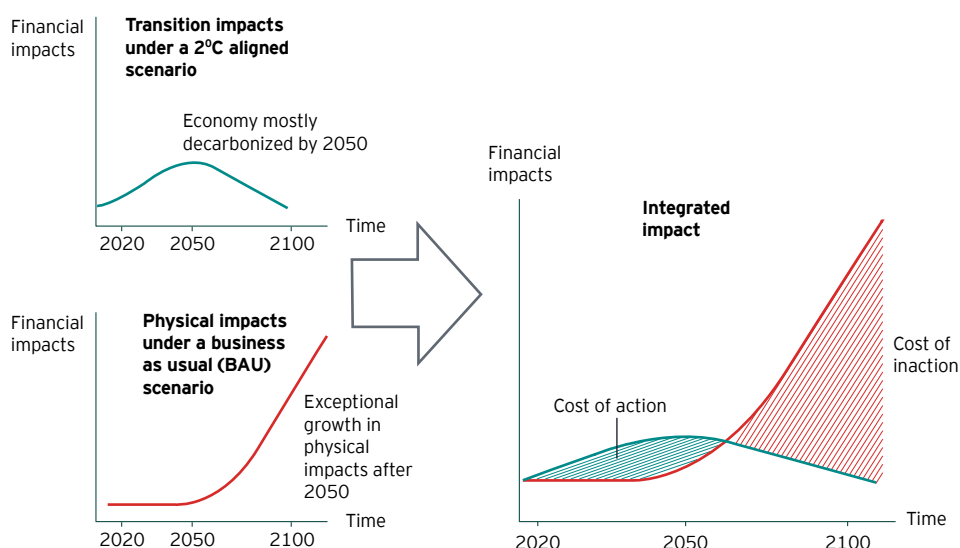
Organizations should understand the relative size and time frame around physical and transition risks in their geography and industry, and construct worst case, base case and most likely case scenarios.

Are aggregated scenarios the answer?

Without significant guidance, scenario analysis may be at risk of becoming too fragmented or inconsistent. To stimulate the right reporting, organizations should have clear definitions and parameters for scenario analysis. Harmonizing reporting standards against which everyone can assess performance is therefore likely to be required. However, having standard scenarios is not necessarily the answer: it may undermine an organization's capability to genuinely stress test risk management practices because standard scenarios don't allow organizations to consider scenarios relevant to their specific business or industry.

While the IPCC and the International Energy Agency may agree standard scenarios for physical risk in 1.5°C, 2°C, 3°C or 4°C futures, there are an infinite number of regulatory and market assumptions on the transition side in different countries and different industries that create different emissions pathways. Also, the magnitude of physical risks is likely to depend not only on the course of climate change but also on

Figure 5: Financial impacts considering an integrated approach



Source: EY, 2021

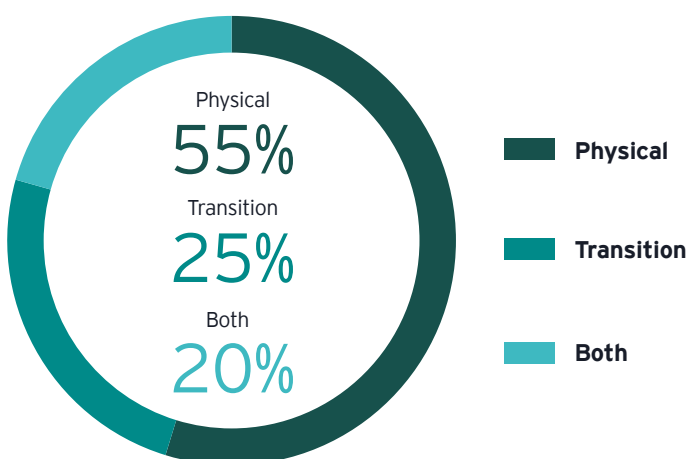
the course of action to mitigate it. As the Financial Stability Board notes: “For example, a sudden and unanticipated policy response to climate change could reduce physical risks, but generate a disorderly adjustment to a low-carbon economy [with high] transition risks in the short-term.”⁸

Organizations should understand the relative size and time frame around physical and transition risks in their geography and industry, and construct worst case, base case and most likely case scenarios. They should also revisit or update scenario analysis whenever significant assumptions change.

⁸ “The implications of climate change for financial stability”, Financial Stability Board, November 2020.

Approximately 60% of companies specifically referenced physical or transition risk or both (as aligned to TCFD recommendations) in their risk commentary with 55% of those referencing physical risks. This could be due to the fact that a 1.5°C scenario is no longer seen as being within reach. Now the physical impacts of climate change are being witnessed more and more, companies are recognizing that they should prepare for physical risks, regardless of when an economy-wide transition occurs. Already, banks are increasingly referencing physical risks as a significant concern in their portfolios.

Figure 6: Proportion of physical to transition risks (where referenced)



CASE STUDIES

In the US, **Duke Energy** not only addressed the TCFD recommendations in its CDP and sustainability reporting but also performed enterprise-level scenario analysis with an illustrative path to net-zero. Its 2020 Climate Report⁹ charts a course to achieve ambitious 2019 carbon goals, including reducing carbon dioxide (CO₂) emissions from electricity generation to at least 50% below 2005 levels by 2030 and achieving net-zero CO₂ emissions by 2050.

BHP released a stand-alone, independently assured Climate Change Report¹⁰ in September 2020 that responds to all 11 TCFD recommendations and presents climate-related portfolio analysis that evaluates the potential impacts of a range of scenarios. Of note, the report sets out in detail BHP's approach to scenario analysis, including the assumptions used and the implications for its commodities for each of the scenarios applied within the analysis (which range from a 1.5°C Paris Agreement-aligned scenario to a nonlinear higher temperature "climate crisis" scenario).

Suncorp addresses climate risks along its value chain, partnering with researchers to deepen its climate change and natural hazard risk insights to support stronger risk selection and pricing.¹¹ It also engages with customers and other stakeholders to help develop community-level risk reduction. The company is seen as a leading voice in advocating for greater government investment in infrastructure to protect communities from natural hazards, helping customers and communities be aware, protected and prepared for natural disasters, and better adapt to our changing climate.

⁹ "Achieving a net zero carbon future", Duke Energy, 2020.

¹⁰ BHP Climate Change Report 2020", BHP, 2020.

¹¹ "Responding to Climate Change," Suncorp, <https://www.suncorpgroup.com.au/corporate-responsibility/sustainable-growth/climate-change>, accessed January 2021.

What should you do with the results of scenario analysis?

Scenario analysis should inform risk assessment, strategy development and investment decisions – and feed into internal remuneration and incentives. Any climate-related financial disclosures should be included in mainstream financial filings – and climate risk information should be included in financial statement estimates and assumptions, including asset impairment models or asset depreciation models.

However, the research found only 15% of companies feature climate change in their financial statements, suggesting

that organizations lack robust data on the financial impact of scenarios or haven't yet fully worked through the implications of these impacts across the business. Of the companies featuring climate change in their financial statements, detail was highly variable. Most did not disclose their assumptions, but rather commented on climate change in the context of aspects that may impact impairment.

The extent (and limits) of the linkage can depend on many factors. Climate risk assessment is likely to have a different time horizon to financial reporting. The present-day impact of future risks may be lessened by the effects of discounting future cash

flows. Also, the assumptions and measurement bases used for climate risk modeling may not be the same as those required by the accounting standards.

Some organizations argue that existing financial reporting should already be capturing all material risks. Certainly, businesses should check they are not double counting risks, which may occur if those risks have already been priced into the discount rate used. However, by undertaking a detailed climate risk analysis, organizations can often unearth new information that should be considered and reflected in financial statements.



The climate risk assessment is likely to have a different time horizon to the reporting.

6

What can
organizations do to
accelerate progress?





Giving sufficient coverage to both the risks and opportunities posed by climate change may help organizations to accurately assess the impact of climate risk, including the impact on strategy (both positively and negatively).

Although the results show year-on-year improvements in reporting, the research suggests most companies lack the internal capability to understand and act on their current and future exposure to climate risks and opportunities.

Better connect with risks and opportunities when reporting

Many organizations are reporting on metrics that don't correlate directly to risks. Disclosing Scope 1 and 2 emissions has no bearing on exposure to physical risk, such as a factory or data center being at increased risk of fire or flood. A more rigorous level of assessment will likely be required to make the climate-related financial disclosures drive behavioral change.

Current climate risk assessments are often limited to certain parts of the business and only include qualitative analysis. Yet the impact of physical and transition risks on products and services, supply chain and operations is known to materially affect operating costs and revenues, with implications for capital expenditures and allocation, acquisitions, divestments and access to capital. Giving sufficient coverage to both the risks and opportunities posed by climate change may help organizations to accurately

assess the impact of climate risk, including the impact on strategy (both positively and negatively).

At the same time, organizations should look to formulate a clear value narrative around their disclosures and carbon commitments. How will these programs create or protect value? If carbon commitments don't demonstrate value and make commercial sense, it may prove hard to align their achievements with business incentives.

Increase risk register granularity

Eventually, the financial risks and opportunities related to climate change should become a natural part of risk assessment – one of an organization's ongoing principal risks embedded into the existing risk management framework. Most organizations are beginning to make progress in this area, moving climate risk into their existing risk frameworks, rather than dealing with climate as a

separate taxonomy. Yet, currently, many organizations have climate-related risks represented in their risk register as “climate change” – or as “physical risks” and “transition risks.” These categories don't provide sufficient detail to allow organizations to measure progress or track the risks. TCFD recommendations can help organizations get down to a level of detail sufficient to articulate specific risks, but these don't tend to be seen across all organizations.

Don't wait for harmonization

Some organizations are using the lack of global reporting standards as an excuse to do nothing, but there is insufficient time to wait for the trade blocs to agree on the same performance metrics. Given the urgent requirement for significant action on climate change in the coming decade, it is important that action is taken now to elude a catastrophic global temperature rise of 3°C-4°C.



7 From climate risk reporting to business transformation

Understanding climate risks and opportunities goes beyond an organization's own footprint, requiring more complex data management, analysis and forecasting.

Responding to climate change risks and opportunities is likely to include business model changes, portfolio rebalancing and investment in new capabilities. To shape their transition path, organizations should take a broader view of their value chain, their industry and their opportunities in a decarbonized economy.

Eventually expand your ambitions to net-zero

The first step is for organizations to reduce their own emissions and use offsets to mitigate further harm to the climate. Carbon neutrality can be achieved at the domestic level with offsets from other jurisdictions – or at the industry level with offsets from other industries. The next step is working with the value chain to reduce exposure and also looking at ways to invest in technologies that have the potential to win in a net-zero world.

Eventually, investors may push for the less nebulous target of net-zero – the point where humans stop adding to the burden of climate-heating gases in the atmosphere.

At that point, organizations may have to think beyond the ambition of carbon neutrality. Mitigating further harm to the climate may not be a differentiator for very long. Ultimately, organizations that adopt a strategy of decarbonization are

likely to benefit from the goodwill of investors, employees and consumers, and the growing, sustainable value that it creates.

Playing a role in getting the planet to net-zero involves understanding where an organization sits in the context of global net-zero and how it can align to science-based targets, which provide companies with a clearly defined path to reduce emissions in line with the Paris Agreement goals. Ideally, organizations should explore the potential to take ambitious climate action, setting a net-zero target in line with a 1.5°C future.¹¹

Find your biggest emission-reduction levers

Understanding climate risks and opportunities goes beyond an organization's own footprint, requiring more complex data management, analysis and forecasting. For most organizations, the emissions from up and down the value

chain (Scope 3) are much higher than those from their own operations (Scope 1 and Scope 2). The biggest levers are likely to come either from downstream manufacturing or transport, or upstream processing, use or transport of their products.

This is not just an issue in emission-intensive industries, such as iron ore mining, where significant Scope 3 emissions come from a customer turning the product into steel. The global apparel and footwear sector produces more greenhouse gas emissions than the shipping and aviation sectors combined¹² – the vast majority through Scope 3 emissions.

As a result, the most powerful emission-reduction levers are rarely intuitive. A major pharmacy brand discovered that 80% of its emissions were associated with the amount of time consumers used its products in the shower. Often, non-meat food production emissions derive largely from transport.

¹¹ "Business ambition for 1.5°C", Science based Targets, <https://sciencebasedtargets.org/business-ambition-for-1-5c>, accessed February 2021.

¹² "Apparel and footwear, Science Based Targets", <https://sciencebasedtargets.org/sectors/apparel-and-footwear>, accessed February 2021.

40%

"If a company's Scope 3 emissions account for at least **40%** of total Scope 1, 2 and 3 emissions, a Scope 3 target should be set." ¹³

For the ICT sector, a major plank of its decarbonization strategy is likely to be encouraging carbon consciousness among end users.

Not surprisingly, stakeholder scrutiny around value chain emissions is growing, especially in carbon-intensive and consumer-facing industries. Science-based target guidance states that "if a company's Scope 3 emissions account for at least 40% of total Scope 1, 2 and 3 emissions, a Scope 3 target should be set." ¹³

The challenge is that, when it comes to carbon, most organizations currently have opaque supply chains. It is incumbent on organizations to work with their suppliers and offer incentives to make them part of the decarbonization process. Just as organizations are examining their supply chains for human rights violations, they should be putting equal energy into analyzing and reducing supply chain emissions.

Seize low-carbon growth opportunities

Equally as important as identifying and implementing emission-reduction changes is looking to move into low-carbon growth markets or create services and products with positive climate change outcomes. Organizations should look at scenarios beyond their own business context, gaining insight into other sectors to understand the opportunities and trade-offs of decarbonization.

¹³ "SBTi Criteria and Recommendations," Science based targets, 2018

The transition to a low-carbon economy is expected to create significant structural changes.

What will net-zero mean at a macro level?

For economies to reach net-zero in time to keep global average temperatures from reaching catastrophic levels, an unprecedented and rapid reduction in global emissions will likely be required. The transition to a low-carbon economy is expected to create significant structural changes. Energy systems are expected to decarbonize, transport systems to electrify and public transport to be powered by zero-carbon sources. The focus of mining should move from fossil fuels to commodities such as copper and nickel, essential to solar energy and electric vehicles, and the precious

metals that are important to technology production. The built environment is expected to transform, using low-carbon materials such as timber and green retrofit projects. In the process, many industries are likely to experience a major reallocation of investment. Based on current market shifts, capital is tipped to move from industries involved in producing fossil fuels and those with energy-intensive business models to suppliers and producers of clean technology innovation, low-carbon solutions, alternative energy sources, low-emissions products and services, and technologies, such as 5G, that are expected to play an important role in decarbonizing energy, transport and manufacturing.

8 What are the next steps?

The world will likely require every business to act now to support decarbonization.

Some organizations are reluctant to act on climate change due to the many uncertainties around the nature, timing and physical impacts of transition risk. However, organizations frequently make calls on the likely future of emerging technologies without knowing their exact time horizons of when they are likely to hit. As the science on climate change has become more detailed than ever – and resoundingly clear – the requirement for immediate action has emerged.

A number of forces are converging to accelerate action to tackle climate

change. Organizations that fail to anticipate this potentially nonlinear disruption as the net-zero transition gathers pace may be exposed to climate-related risks and be underprepared for the associated climate-related opportunities. The world will likely require every business to act now to support decarbonization.

Businesses should be able to answer the following questions:

- ▶ What is the extent of the risks and opportunities my organization is facing as a result of climate change?

- ▶ How should my organizational strategy change to respond to the identified risks and opportunities from climate change? And what strategic initiatives will be required?
- ▶ What should I do to execute on my decarbonization journey?
- ▶ How do I communicate with the market on the extent of my risks and opportunities, the proposed changes to my strategy and the progress on my decarbonization journey?

Aligned to this, companies should consider the following stages of workflow:



Figure 7: Proposed workflow to support decarbonization

Understand climate risks and opportunities – this includes:

- ▶ Mapping your entire value chain, up and downstream, and analyzing your carbon footprint to identify material exposures
- ▶ Performing scenario modeling to stress test your business and clarify risks (both physical and transition) and opportunities, and quantify the financial consequences of climate risk

Develop and implement climate strategy – starting the process by:

- ▶ Defining your purpose and ambition, and any reduction targets
- ▶ Identifying and assessing your strategic options – this includes, but is not limited to:
 - ▶ Decarbonization of products
 - ▶ Transforming supply chain
 - ▶ Optimizing operations
 - ▶ Reducing your portfolio risks
 - ▶ Integrating technologies

Communicate performance

to the depth required to allow your stakeholders to fully and transparently evaluate your climate performance – this includes backing up your climate-related disclosures with narratives that offer the same level of commercial insight as you apply to your financial reporting.

EY Climate Change and Sustainability Services (CCaSS) teams can help organizations on their decarbonization journey.

9 About this research



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

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

In addition to the annual snapshot of organizations' uptake of the recommendations, this edition (which comprises a wider sample of 1,127 companies in 16 markets) uncovers trends and focus points, including:

- Quality of climate-related disclosures
- The evolution and improvement of climate scenario analysis
- The translation of climate-related risks into financial impacts

TCFD recommendations

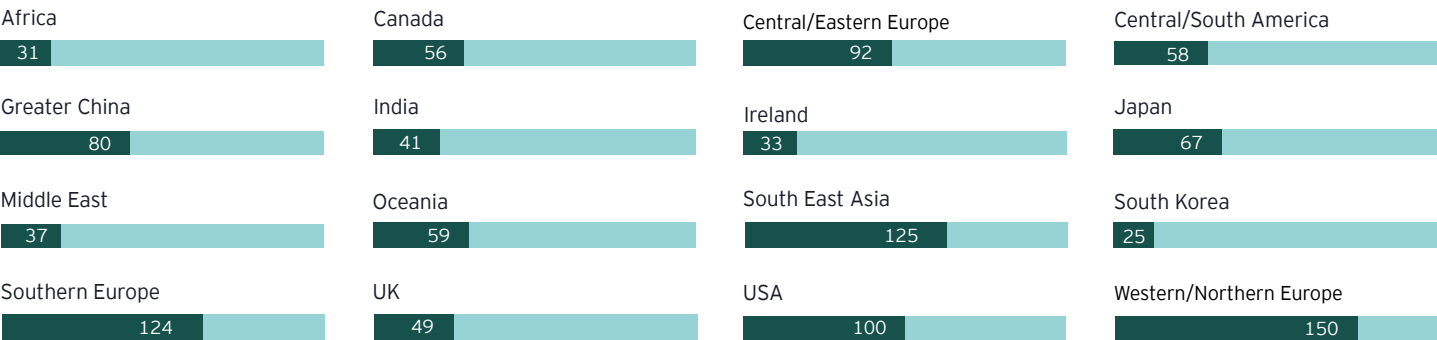
The TCFD recommendations aim to improve investors' understanding of the impact of climate risks on different corporations and reduce the risk of a systemic financial shock on the economy due to climate change. The recommendations provide a reporting framework for climate risks that can be integrated with current financial reporting disclosures. They define climate impacts as:

- Transition impacts that reflect the risks and opportunities associated with changes in the economy, including growth impacts, sector reweighting and other macroeconomic factors
- Physical impacts that reflect the changes in the physical climate (e.g., altered rainfall amounts, intensities and timings) that may impact future business activities

The TCFD recommendations also provide specific guidance for certain high-risk sectors, such as banks, insurance companies, and asset owners and managers in the financial sector, as well as in other sectors such as energy, transportation, and agriculture, food and forest products.

Methodology

This research assesses the TCFD disclosures of the largest public companies in high-risk sectors (as identified by the TCFD recommendations) in the following jurisdictions:



Number of organizations assessed

Total number of organizations assessed – 1127

Structure of the research

The analysis groups companies into sectors that correspond to the sectors identified in the TCFD recommendations and other key sectors of the global economy.

Financial services sector



Nonfinancial sectors



Number of organizations assessed

Total number of organizations assessed – 1127

The scope of the 2020 report was expanded from 2019 as follows:

- ▶ The number of assessed companies and participating jurisdictions is 16% larger than in the 2019 report.
- ▶ The assessed companies have been selected predominantly on the basis of market capitalization. Hence, jurisdictions that participated in both the 2019 and the 2020 reports will see some changes to the list of companies assessed depending on the year-on-year change to the market capitalization.

Because of these changes, it was not possible to include a meaningful in-depth year-on-year analysis. While the year-on-year evolution is displayed and briefly commented on, the main analysis of the most detailed sections of the document therefore remains at sector level and focuses on each of the four TCFD components.

Scoring

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

1. Coverage

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

2. Quality

Companies that implemented all 11 recommendations were given a rating (out of 5) on the basis of the quality of the disclosure, expressed as a percentage of the maximum score.

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)
- 3** – aspect discussed in detail
- 5** – addressed all features of the aspect in the disclosure

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