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ABOUT

Moody's is committed to helping market participants advance strategic resilience, responsible capitalism, and the greening of the economy. Our offerings span across credit, ESG, sustainable finance, and climate risk solutions and help our customers identify risks and opportunities and provide meaningful performance measurements and insights.

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Climate Solutions – Global

State of TCFD Disclosures 2021

Summary

Climate-related financial risk disclosures show a steady improvement in 2021 compared to 2020. Based on our assessment of over 3,800 companies worldwide, the global average disclosure rate across all 11 Task Force on Climate-related Financial Disclosures (TCFD) recommendations increased to 22% in 2021 from 16% last year. In 2021, the transportation sector – which includes automobile companies and other transport & logistics companies – is the most improved sector in terms of climate reporting, increasing its average disclosure rate to 27% across all 11 recommendations from 14% in 2020.

The energy and financial sectors are top performers in reporting on climate governance. 30% of energy companies covered in our study describe the board's oversight of climate-related risks and opportunities in their reporting. Similarly, 33% of the assessed financial sector companies disclose the management's responsibility in handling climate-related issues.

Disclosure on integrating scenario analysis into business strategy remains low. Only 13% of the companies disclose conducting scenario analysis and the potential impact on their businesses, which are key components of climate resilience strategies. Energy and transportation companies are most advanced in their disclosure on the resilience of climate strategies. For example, energy firms are providing more granular information on their investment in renewable energy, fuel-efficient transport vehicles and carbon-capture technologies.

Risk management reporting generally improved in 2021. Companies providing disclosure on climate risk identification and assessment increased to 19% in 2021 from 8% last year, which represents the most marked improvement amongst the three recommendations within the risk management pillar. The agriculture, food and forest products sector shows the lowest disclosure rate for overall integration into companies' risk management, despite the significant exposure of these sectors to climate risk and associated threats, such as biodiversity loss.

Greenhouse gas emissions (GHG) are generally reported more than other metrics and targets. 58% of organizations disclose their carbon footprints using Scope 1 and Scope 2 GHG emissions. However, disclosures on Scope 3 emissions remains a challenge and the number of companies that disclose their Scope 1, 2, and 3 GHG emissions are in the minority. Meanwhile, 21% of companies disclose GHG emission reduction targets in 2021, marking an improvement from 17% in 2020. With the increase in net zero commitments, we believe this will be an area of increasing demand for robust disclosure going forward as investors look for consistent and transparent information on how long-term pledges translate into interim targets and whether science-based target-setting methods are being adopted.

The landscape is shifting from voluntary to mandatory disclosures

The recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) were launched in 2017. They have been designed to provide material information to investors, lenders, insurers, and other stakeholders and support more transparent and efficient market pricing of climate risks and opportunities. The TCFD recommendations were originally published as voluntary disclosures for companies. However, the landscape is changing, and the recommendations have broad support from financial regulators globally and many jurisdictions have announced plans for mandating TCFD disclosures, including New Zealand,[1] the United Kingdom, Hong Kong and Switzerland,[2] at the time of writing. In the second quarter of 2021, the European Union adopted a proposal for a Corporate Sustainability Reporting Directive (CSRD) which integrates the TCFD framework as its climate-reporting standard.[3] And the International Financial Reporting Standards (IFRS) Foundation will launch a new board to develop global standards for climate-related reporting and other sustainability topics, building on the TCFD recommendations.[4] The TCFD 2021 Status Report, released in early October, notes that over 1,000 new organizations have signed on to support the recommendations and the rate of disclosure has increased more between 2019-2020 than any other year.[5]

This increased support for TCFD disclosure comes alongside an increase in extreme weather events, growing net zero commitments and more widespread shareholder pressure for companies to both address their climate risks and support the transition to a low-carbon economy. Consistent, quantitative climate risk disclosure is an essential step in building transparency. Understanding the current state of disclosure provides insight into the progress made and the significant improvement needed in terms of decision-useful climate risk disclosure.

In 2019, Moody's ESG Solutions launched an assessment framework designed to measure the extent to which companies report their climate-related risks and opportunities in line with the TCFD recommendations. To date, we have assessed over 3,800 companies against our TCFD Climate Strategy framework. This report shares latest findings from this dataset, analyzing the changes in disclosure since last year. We also explore disclosure trends by sector group, including the financial sector and four non-financial groups – energy; transportation; materials and buildings; and agriculture, food, and forest products sectors. These sector groups are based on the five broad sector groups for which the TCFD has issued supplemental guidance.

Methodology: Leveraging the TCFD Strategy Assessment to assess progress on disclosure

The TCFD built its recommendations around a set of pillars that represent the core areas of how companies operate: governance, strategy, risk management, and metrics and targets. Moody's ESG Solutions' TCFD Climate Strategy Assessment database includes 27 indicators mapped to the pillars of governance, strategy, and risk management. We provide scores at the pillar level based on whether or not companies disclose relevant indicators, as well as a total score ranging from 0 to 100, with 100 indicating the highest performing disclosures.

For this report, we map 24 of our indicators to the individual components underlying each pillar of the TCFD recommendations, so that we can analyse progress made at the individual component level based on representative indicators (see Table 1). To supplement the analysis, we also leverage indicators from our transition risk and ESG datasets to provide insight on disclosures in line with the fourth pillar on metrics and targets.

This analysis is based on binary indicators capturing whether or not a company disclosed the indicators in table 1. Thus, it provides a high-level view on the state of disclosure in line with the TCFD recommendations, but does not provide insight into the quality of these disclosures in terms of their granularity or comparability. Case studies on best performers providing a more granular perspective of the quality of specific companies' disclosures.

1 New Zealand becomes first to implement mandatory TCFD reporting, Climate Disclosure Standards Board, 15 September 2020.
2 Swiss government embraces 'double materiality' in new TCFD requirements, Responsible Investor, 18 August 2021.
3 Directive of the European Parliament and of the Council regarding corporate sustainability reporting, European Commission, 21 April 2021.
4 IFRS Foundation Trustees announce working group to accelerate convergence in global sustainability reporting standards focused on enterprise value, IFRS, 22 March 2021.
5 The 2021 Status Report: Task Force on Climate-related Financial Disclosures leveraged an AI review of TCFD disclosure from Moody's Analytics. While the AI were trained using Moody's ESG Solutions' TCFD Climate Strategy Assessment, the results are different – typically showing higher disclosure rates than those in this report. Discrepancies are due to the fact that the data used in this report is based on analyst review which may have a higher threshold for considering TCFD compliance; and the analyses cover different subsets of companies with different sample sizes.

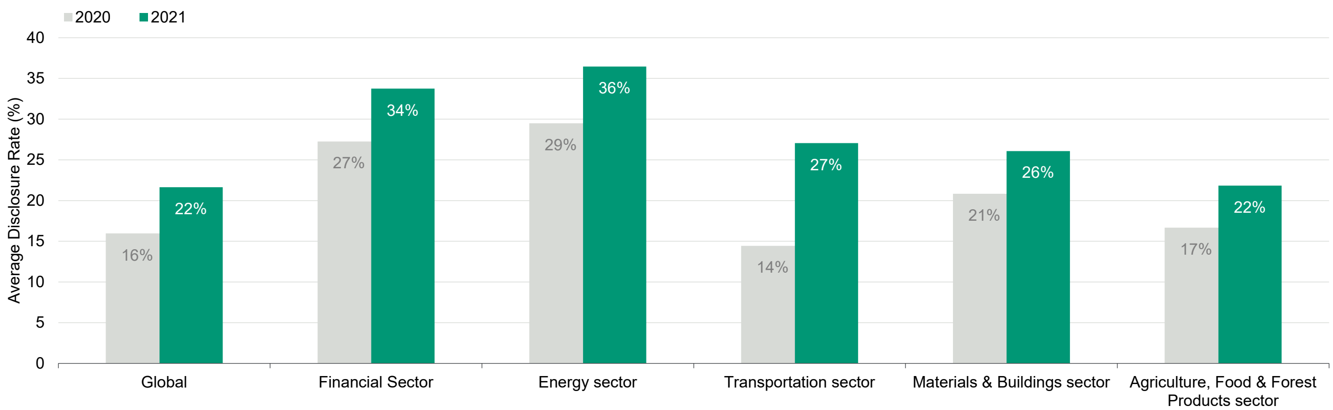
Table 1 Moody's ESG Solutions indicators used to assess adoption and disclosure level of TCFD recommendations

TCFD Recommendations		Moody's ESG Solutions Assessment Indicators
Governance	Describe the board's oversight of climate-related risks and opportunities	Processes used by the board to integrate climate change related issues in the company's strategy Processes used by board to monitor and oversee progress on climate-related goals and targets
	Describe management's role in assessing and managing climate-related risks and opportunities	Climate change-related responsibilities assigned to management level positions Processes used to inform the management (such as CEO, CFO or COO) of climate-related issues
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	Description of climate-related risks; policy and legal, technology, market, reputation, and physical risks
	Describe the impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning	Development of products or services contributing to the transition to a low-carbon economy Acquisition of businesses contributing to the transition to a low-carbon economy Development of a low-carbon transition plan
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Climate change scenario analysis and potential impacts on the company's business Divestment from/ decommissioning of carbon intensive assets/ activities Climate-change factored into financial planning
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks	Risk mapping, materiality assessments and risk score cards Engagement with companies or value chain Analysis of evolving legislation on climate change
	Describe the organization's processes for managing climate-related risks	Risk management plans Adaptation activities to ensure resilience to physical impacts of climate change plan to support long-term business strategy Enhanced due diligence applied to projects and transactions
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	Integration into overall enterprise risk management
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	Carbon footprint using direct and indirect emissions (Scope 1 and 2)
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	Scope 1, 2 and 3 GHG emissions
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	Climate-related targets such as GHG emissions-reduction targets

Climate-related financial risk disclosures show a steady improvement in 2021 compared to 2020

Our study of companies' climate-related financial risk disclosures between August 2020 and July 2021 (referred to as 2021 scores in this report) finds a general improvement in the alignment of organizations' reporting to the TCFD recommendations. However, the global average disclosure rate across all the 11 recommendations remains limited at 21% in 2021 despite a moderate increase from 16% in the previous year (Figure 1).[6][7] We expect the year-on-year improvement to accelerate in the next several years as regulators begin to mandate climate risk disclosures and market practitioners demand more decision-useful information from companies.

Figure 1 Average disclosure rate across all the 11 recommendations by sector



Source: Moody's ESG Solutions

The energy sector shows the highest average sector disclosure rate across all 11 recommendations at 36% in 2021 compared to 29% last year, followed by the financial sector at 34%. This is likely due to the relatively clear impacts of transition risk on energy companies' business strategy and the growing demand to disclose this information to shareholders. The transportation sector improves the most with a nine percentage point increase from last year to stand at 27% in 2021. This improved disclosure comes alongside other efforts the transportation sector is making to prepare for a low-carbon future, reflecting the trend towards reorienting their business models, such as through investments in electric vehicle production.[8]

The number of companies disclosing varies significantly by indicator, as can be seen in Table 2. In the remainder of the report, we share key findings for each category of reporting and trends by sector.

6 Last year's dataset included 2,855 companies, while this year's dataset includes nearly 3,800 companies.
7 See Measuring TCFD Disclosures, Vigeo Eiris and Four Twenty Seven, September 2020.
8 See Cross-Sector – Global Credit implications of carbon transition positioning are coming to the fore. Moody's Investors Service, September 2021.

Table 2 TCFD-Aligned disclosure rate by year

Pillar	Recommendations		Year	Percent of companies that disclose information aligned with TCFD recommended disclosures 2020-2021
Governance	(a)	Board Oversight	2020	8%
			2021	12%
	(b)	Management's Role	2020	11%
			2021	13%
Strategy	(a)	Risks and Opportunities	2020	17%
			2021	17%
	(b)	Impact on Organization	2020	11%
			2021	15%
	(c)	Resilience of Strategy	2020	8%
			2021	13%
Risk Management	(a)	Risk ID and Assessment Process	2020	8%
			2021	19%
	(b)	Risk Management Process	2020	3%
			2021	12%
	(c)	Integration in Overall Risk Management	2020	10%
			2021	14%
Metrics and Targets	(a)	Climate-Related Metrics	2020	56%
			2021	58%
	(b)	Scope 1, 2, and 3 Emissions **Metrics	2020	27%
			2021	43%
	(c)	Climate-Related Targets	2020	17%
			2021	21%

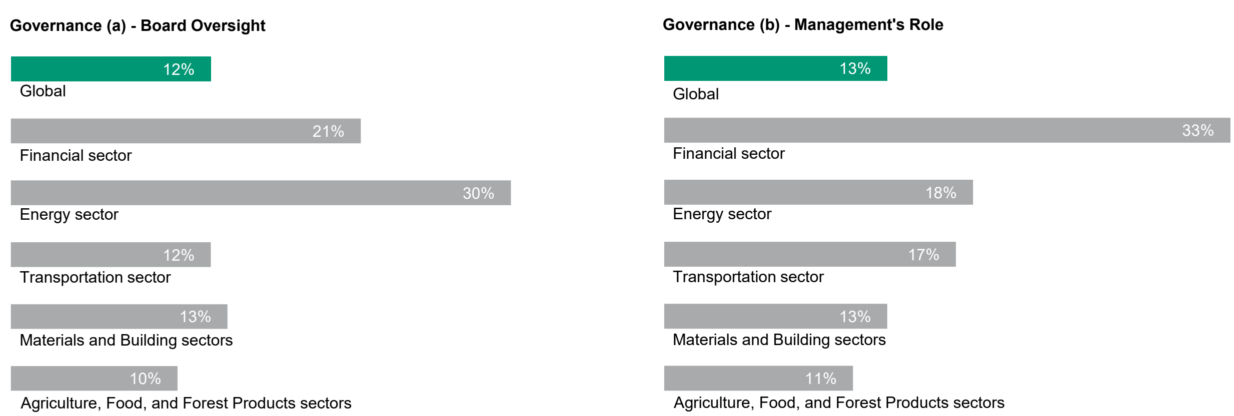
The energy and financial sectors are top performers in reporting on climate governance

The reporting rate on governance indicators, including the role of management and board oversight, has increased by an average of five percentage points in 2021. Overall, 12% of companies in our analysis report board oversight of climate-related risks and opportunities on some level, while 13% report on management's role in assessing these risks and opportunities (Figure 2).

The energy sector shows the highest performance for disclosure on board oversight, with 30% of companies disclosing information on this component, which covers the extent to which a company has implemented processes for reviewing strategy, plans, and budgets, as well as a review of risk management policies that consider climate risks factors at the board level. This level of transparency is not observed in the energy sector's reporting on management's responsibility in handling climate issues. On the other hand, 33% of companies in the financial sector disclose the management's role in climate governance in 2021.

The transporation sector sees the largest improvement in the governance pillar, with 12% of companies disclosing on board oversight and 17% of companies on management's role in 2021, up meaningfully from 4% and 3% respectively last year.

Figure 2 Disclosure rates of the governance pillar by sector groups in 2021



Source: Moody's ESG Solutions

Example Disclosure: Galp Energia – Energy

Galp Energia (Galp) is an energy company with an advanced total score (85/100) in our TCFD Climate Strategy assessment. The company performs well in disclosing information on its climate governance structure and process. In terms of board structure, Galp Energia has set up a sustainability committee within the board which is responsible for the monitoring and oversight of climate-related goals and targets. The organization has also described a reporting system used by both the sustainability committee and the risk management committee to inform the board of directors on climate change issues. Likewise, it discloses its internal carbon price of $50 per tonne CO_2e.

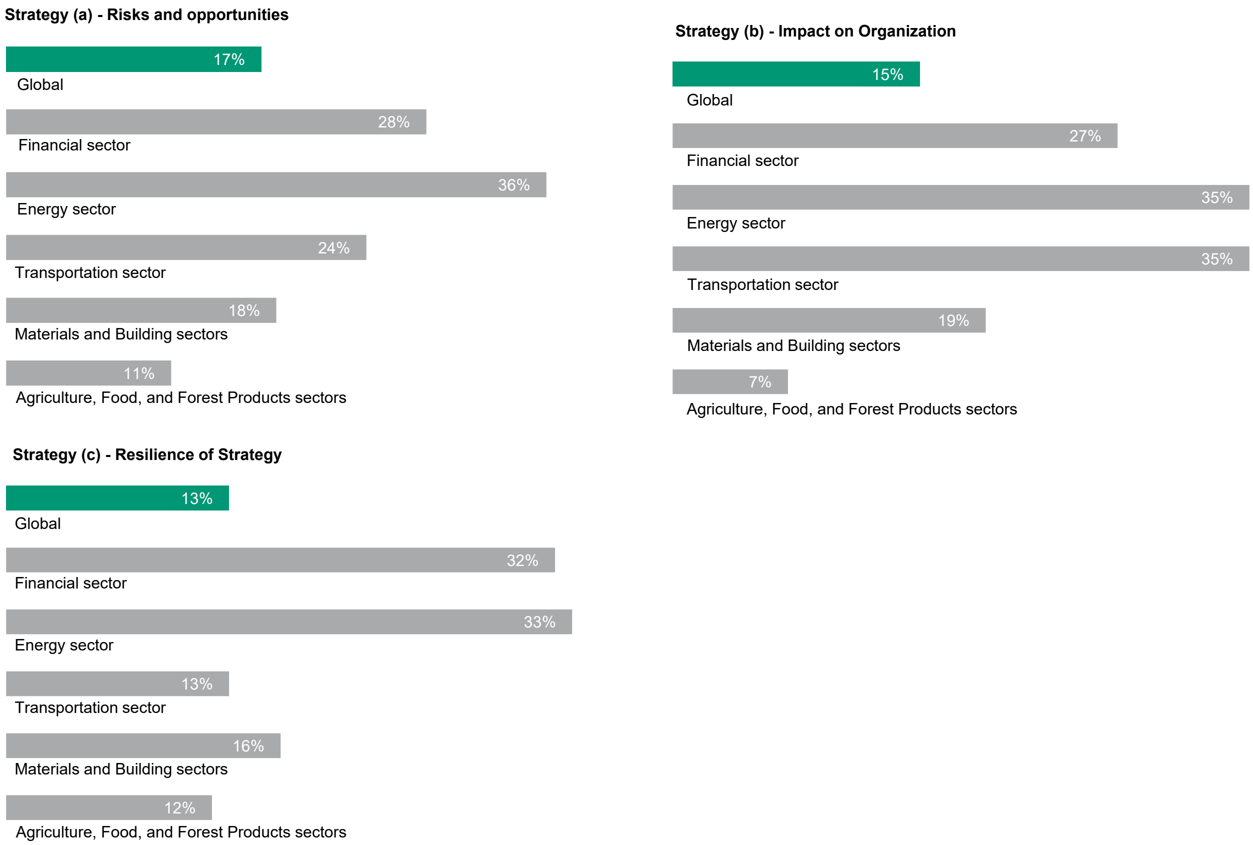
Galp also discloses how management incorporates climate-related issues into decision-making. For example, procurement managers consider climate impacts in materials, equipments and solutions used by the organization, which shows an advanced understanding of climate impacts across the value chain and is an important element in mitigation of both physical and transition risks, including Scope 3 GHG emissions. Likewise, risk managers consider climate risks in investment decisions according to the organization's reports. While Galp explains its methodology for assessing its emissions and carbon intensity, the company's reporting could be further improved by including detailed methodologies of its physical risk and value-at-risk assessment, which would help investors compare its findings with those of other firms.

Disclosure on integrating scenario analysis into business strategy remains low

The percentage of companies reporting on recommendations within the strategy pillar of the TCFD recommendations increases slightly in 2021 compared to the previous year. At 36%, the energy sector has the highest disclosure rate of climate-related risks and opportunities. The financial sector has the next highest disclosure rate for this recommendation (at 28%), reflecting both increasing pressure on financial institutions to prepare for the systemic impacts of climate risk and the financial sector's traditional experience in recognizing and disclosing systematic risks resulting in asset value losses. We expect the sector's integration of forward-looking analysis in climate reporting to advance as regulatory requirements around climate risk management, including stress testing, are tightened. However, it is important to note that the financial sector's exposure to climate risk largely stems from its lending and investment portfolios and thus improved risk disclosure by other sectors will be critical to enable financial sector firms to enhance the robustness of their own risk assessments.

Scenario analysis is a key part of the third component of the strategy pillar – assessing the resilience of a company's strategy. Investors are increasingly seeking transparency on how a company may be affected by different potential climate futures. Yet, only 13% of companies disclose information on conducting climate change scenario analysis and assessing the potential impacts on the business (Figure 3). The energy sector and transportation sector exhibit the greatest disclosure relating to resilience of climate strategies in 2021. For example, companies disclosing this recommendation in the energy sector report on additional strategies such as increased investment in renewable energy, fuel-efficient transport vehicles and carbon-capture technologies.

Figure 3 Disclosure rates of the strategy pillar by sector in 2021



Source: Moody's ESG Solutions

Example Disclosure: Societe Generale – Banking

The financial sector generally includes relatively high-performing companies when it comes to reporting on the strategy pillar. One such company is Societe Generale. The bank has an advanced total score (80/100) in our TCFD Climate Strategy assessment and has published its "climate-related risk terminology". Within this reporting, the bank quantifies the transition and physical risks it faces as well as the time horizon considered. Similarly, the bank also describes climate-related opportunities arising from the energy transition and the corresponding time horizons across various sectors.

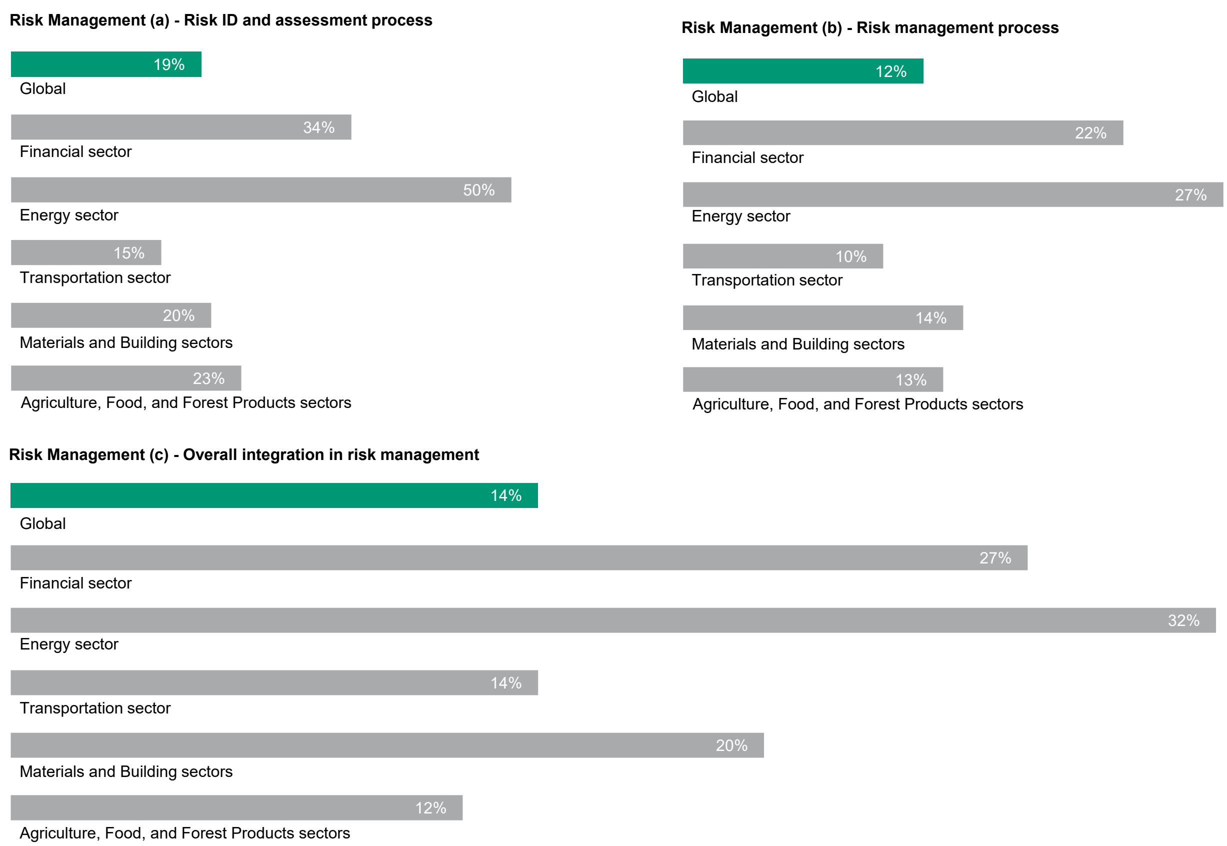
For scenario analysis, the bank discloses the processs it uses to select its climate change scenarios and how it uses a transition scenario to determine the transition risk impact on its corporate portfolio. Societe Generale also explains that in line with its climate change scenario analysis, it has reduced its coal financing.

Risk management reporting generally improved in 2021 compared to 2020

Disclosure rates for risk identification and assessment have seen one of the largest year-on-year increases, improving to 19% in 2021 from 8% in 2020. We find that half of companies in the energy sector report on this metric, which includes processes to analyze evolving legislation on climate change, and active engagement with their value chain to assess climate risk factors.

The financial and energy sectors show the highest rate of disclosure on their risk management process in 2021 as seen in Figure 4. The risk management process component includes reporting on indicators such as enhanced due diligence applied to projects and transactions, risk management plans, and adaptation activities to ensure resilience to physical climate risk. The transportation sector shows the lowest disclosure rate on its risk management processes, at just 10%. Transportation companies that do not disclose this component miss an opportunity to provide transparency on their plans to manage their significant exposure to both physical risks, and transition risks that may arise from potential mandatory phase out of fossil fuels. Indeed, we have previously highlighted the increasing physical climate risk facing US automanufacturing hubs in Michigan and Tennessee – which are both seeing increasing investment in electric vehicle production capabilities. Likewise, the agriculture, food and forest products sector shows the lowest disclosure rate for overall integration into companies' risk management, despite the significant exposure of these sectors to climate risk and associated threats, such as biodiversity loss.

Figure 4 Disclosure rates of the risk management pillar by sector in 2021



Source: Moody's ESG Solutions

Example Disclosure: Canadian National Railway – Transportation

Risk management is particularly important for the transportation sector, which has high exposure and vulnerability to both transition and physical risks. One high performing company in this sector is the Canadian National Railway which has invested in a five-year optimization research project with the Université de Montreal to develop mathematical models that have the potential to improve operational and fuel efficiency (as well as reduce carbon emissions).

Based on its disclosures, Canadian National Railway factors climate change into its financial planning by allocating operational expenditures to respond to the physical effects of climate change, such as extreme weather readiness plans, emergency response planning, inspection programs, and strategies to deploy non-rail modes of transport. The company does disclose the underlying assumptions of its analysis and this indicates that the company is striving to assess and manage its climate-related risks. However, while the disclosure mentions the potential impacts of hazards, such as increasing temperatures, the physical risk scenario analysis focuses primarily on the impact of extreme cold temperatures. Yet our physical climate risk data finds that between 65-70% of assessed Canadian National Railway facilities are highly exposed to heat stress, and 21-26% are highly exposed to floods, suggesting that these hazards may also present significant risk to the company. The most informative risk disclosures include forward-looking analysis of several physical climate hazards such as floods, heat waves and wildfires.

Source: Canadian National Railway TCFD and CDP Report

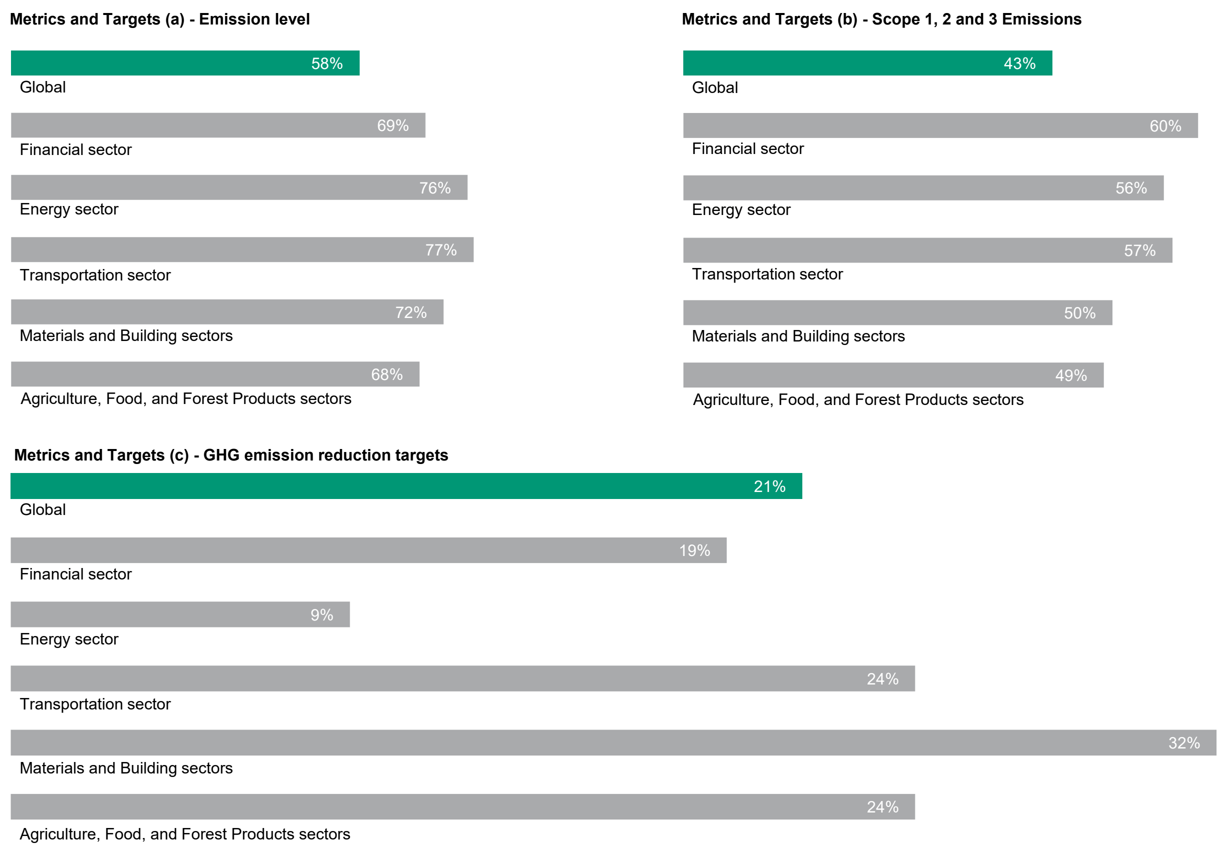
Greenhouse gas emissions (GHG) are generally reported more than other metrics and targets

An increasing number of companies are disclosing indicators related to emissions compared to other metrics. More than half (58%) of the organizations covered in 2021 disclosed carbon footprints from their Scope 1 and 2 GHG emissions, mostly in their sustainability reports, annual reports, or integrated reports (Figure 5). However, a lower share of companies (43%) disclose all types of emissions, including Scopes 1, 2 and 3. It is also important to note that this report focuses on whether or not companies disclose these metrics but does not consider the underlying details and quality of the disclosures for each metric. Assessment and disclosure of Scope 3 GHG emissions is notoriously limited due to a lack of consistency in assessment methodologies and the challenges that companies face in obtaining this data. We expect disclosure of Scope 3 emissions to continue improving as we see standard-setters step in to provide guidance on climate-related performance measurement metrics in future disclosure requirements, such as the 'climate standard prototype' working paper of the European Financial Report Advisory Group.[9] Likewise, we also expect disclosure on other metrics, including GHG reduction targets, energy consumption by source, and forward-looking physical risk exposure to continue to improve as companies look to align with emerging regulation and developing global disclosure frameworks, such as the EU Sustainable Finance Disclosure Regulation and the reporting frameworks being created by the IFRS Sustainable Standards Board and the Taskforce on Nature-related Financial Disclosure. In fact, alongside its status report the TCFD released updated guidance on more specific metrics for physical and transition risk.[10]

Overall, 21% of the companies in our study disclose GHG emission reduction targets in 2021, marking an improvement from 17% in 2020 (Table 2). With the increase in net zero commitments, we believe this will be an area of increasing demand for robust disclosure going forward. Investors will likely look for consistent and transparent emissions reductions targets, including how long-term commitments translate into short-term interim targets and the adoption of science-based target-setting methods.

9 'Climate standard prototype' working paper, EFRAG, 8 September 2021.
10 See Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures. Taskfoce on Climate-related Financial Disclosures, October 2021.

Figure 5 Disclosures rates of the metrics and targets by sector in 2021



Source: Moody's ESG Solutions

Example Disclosure: HeidelbergCement – Materials & Buildings

HeidelbergCement stands out with a total score of 74/100 in the TCFD Climate Strategy Assessment, with particularly strong disclosure in the metrics and targets pillar. HeidelbergCement discloses its Scope 1, 2 and 3 emissions by business line, representing a thorough emissions disclosure compared to others, and also includes third party assurance of its findings. In addition, the organization has disclosed a science-based CO_2 intensity target of reducing GHG emissions per tonne of cement-based materials by 15% for Scope 1 and 65% for Scope 2, both by 2030 from a 2016 base year. The details in this disclosure are useful to provide an understanding of where HeidelbergCement is on its transition journey and highlight opportunities to further improve, such as by providing long-term targets that include Scope 3.

Moody's ESG Solutions provides insights and analyses on ESG themes and multi-stakeholder performance, climate-related risks and opportunities and global sustainable finance trends. For more information, visit esg.moodys.io.

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