Measuring TCFD Disclosures

Report by Vigeo Eiris and Four Twenty Seven

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INTRODUCTION

The recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) were launched in 2017.[1] They consist of a set of voluntary, climate-related financial risk disclosures for companies. The objective of these disclosures is to provide material information to investors, lenders, insurers and other stakeholders to support a more transparent and efficient market, that can begin to accurately price climate risks. In 2019, Vigeo Eiris (V.E) launched a new assessment framework designed to measure the extent to which climate-related risks and opportunities are being reported on by companies. To date, 2855 companies have been assessed[2] against our TCFD Climate Strategy framework.

In this research paper, we examine where companies stand today in terms of adopting the TCFD recommendations. Unsurprisingly our research indicates that most companies still lag behind in terms of disclosures. Nonetheless, there are some signals that the TCFD recommendations have started to be adopted across sectors and geographic zones, with early leaders emerging. Alongside, Four Twenty Seven we used the energy sector as a case study to review how companies' physical risk exposure compares to their risk disclosure. We find that many highly exposed companies do not yet thoroughly disclose their climate risks, which is important for investors to consider when reviewing disclosures.

As we finalised this paper, New Zealand became the first country to announce mandatory TCFD reporting for listed issuers, banks, asset managers and insurers of a certain size.[3] The regulation is set to come into effect in 2023 giving companies time to align their reporting accordingly. We are yet to see whether other states adopt similar measures, but such a direct approach is certain to increase the uptake of climate risk disclosure. There is growing recognition of the financial impacts of climate change and the importance for market participants to consider, value and report on these dimensions. If investors, shareholders and other actors are to make informed decisions, the adoption of TCFD-aligned disclosures will need to accelerate rapidly in the coming years.

1 For more information, please see their website: https://www.fsb-tcfd.org/

2 Companies were assessed between April 2019 to June 2020: European (*845*), Asia Pacific (*811*), North American (*617*), Middle East and Africa (*19*), Rest of the World (Emerging and Frontier Markets included - *566* companies).

3 The climate reporting requirements typically apply to entities with total assets over USD 1bn, investment schemes with greater than USD 1bn in Assets Under Management (AUM), licensed insurers with greater that USD 1bn in AUM etc

KEY FINDINGS

The results presented in this report cover a universe of 2855 global companies.[4] Our research suggests that progress is being made towards better quality and more granular climate risk-related disclosures but at a slow pace. Despite this slow start, it is evident that the TCFD framework has been successful in having a global footprint and helping to catalyse widespread awareness of climate risk reporting, with companies across all regions using it as a reference.

- 30% of the companies have identified at least one climate-related risk that may affect their business and strategy over the short, medium and long term.
- Physical risks are most frequently reported, followed by policy and legal risks.

Governance:

- 15% of the companies report on having assigned climate-related responsibilities to management and 16% have established processes to inform board members about climate change issues.

Strategy:

- 12% of all assessed companies report the development of products or services that contribute to the low-carbon economy, making it the most common Strategy disclosure.
- Only 8% of the European and 7% of the North American companies in the panel disclosed climate change as a material factor in their financial planning.

Risk Management:

- 30% of the assessed energy companies[5] report using an internal carbon price.
- Enhanced due diligence for projects and transactions remains a minority practice, with only 3% of companies disclosing information on this specific recommendation.

4 This research universe is subsequently referred to in this paper as the 'panel'.
5 A total of 109 energy companies are included in the panel.

ASSESSMENT INDICATORS

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. To assess the adoption and disclosure level of the recommendations, we have broken down the pillars of governance, strategy and risk management into a framework of 27 indicators. This complements V.E and Four Twenty Seven's existing datasets on companies' exposure to transition and physical risks.

Table 1: List of all indicators within V.E's TCFD Climate Strategy Assessment

TCFD	V.E Indicators
Governance - Visibility	▪ TCFD Signatory ▪ TCFD Reporting Compliance
Governance – Relevance	▪ Policy & Legal Risks ▪ Technology Risks ▪ Market Risks ▪ Reputation Risks ▪ Physical Risks
Governance - Ownership	▪ Processes used to inform the board members/committees about climate change related issues ▪ 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 over climate-related goals and targets ▪ Climate change related responsibilities assigned to management level positions ▪ Processes used to inform the management (CEO, CFO, COO etc) of climate-related issues ▪ Description of the climate-change organisational structure
Strategy	▪ Development of products or services contributing to transition to a low carbon economy ▪ Acquisition of business contributing to transition to a low-carbon economy ▪ Divestment from/decommissioning of carbon intensive assets/activities ▪ Climate change scenario analysis and their potential impacts on the company's business strategy ▪ Climate-change factored into financial planning ▪ Participation in climate-related industry/multi-stakeholder working groups
Risk Management	▪ Risk management plans ▪ Integration into overall enterprise risk management ▪ Developed a low-carbon transition plan ▪ Adaptation activities to ensure resilience to physical impacts of climate change plan to support long-term business strategy ▪ Engagement with companies or value chain ▪ Analysis of evolving legislation on climate change ▪ Risk mapping, materiality assessments and balanced score cards ▪ Enhanced due diligence applied to projects and transaction ▪ Use of an internal carbon price

GOVERNANCE

Within the Governance section of our framework, we use a range of indicators capturing the commitments made by companies, the risks that they cover as well as the ownership of the Board over these issues. In this section we zoom in on a subset of those indicators, focussing on the six indicators[6] that provide a view on the level of oversight and influence of the Board of a company on climate-related risks and opportunities.

Table 2. Governance Pillar: Assessment Criteria

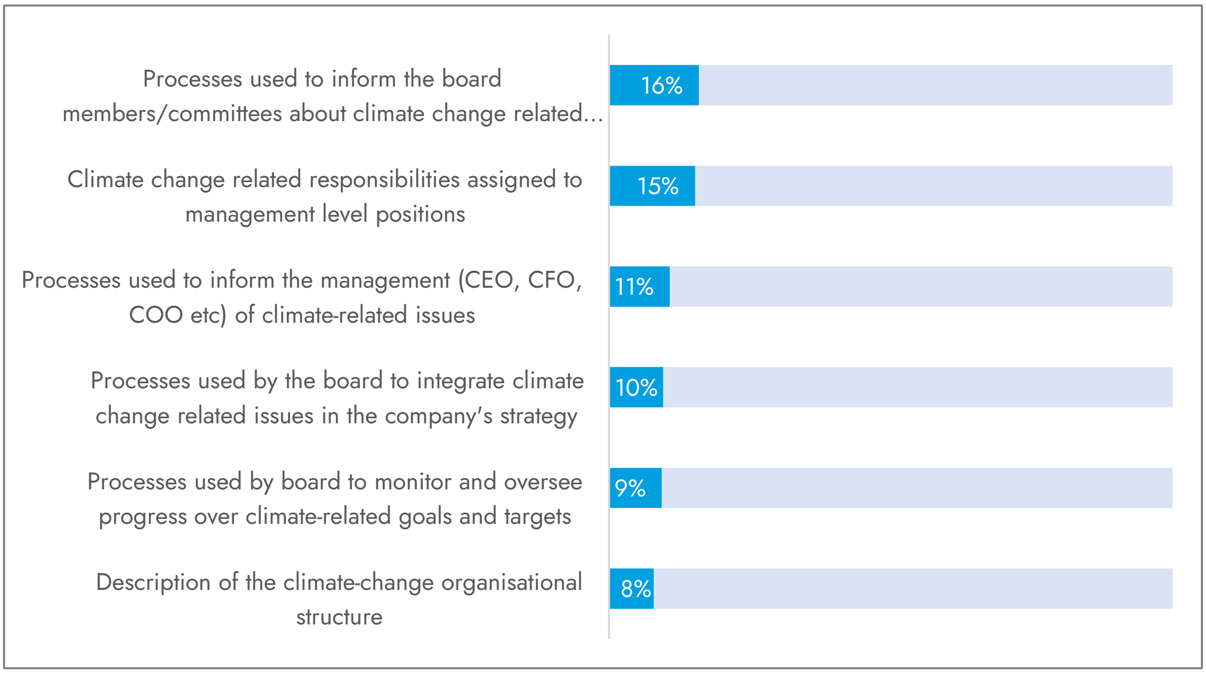
Governance	
TCFD Recommendations	**V.E's assessment indicators**
• Describe the board's oversight of climate-related risks and opportunities • Describe management's role in assessing and managing climate-related risks and opportunities.	• Processes used to inform the board members/committees about climate change related issues • 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 over climate-related goals and targets • Climate change related responsibilities assigned to management level positions • Processes used to inform the management (CEO, CFO, COO etc) of climate-related issues • Description of the climate-change organisational structure

16% of the panel have visibly established processes to inform board members about climate change issues and just 15% disclose having assigned climate-related responsibilities to management. Just half of them have established processes used by the board to monitor and oversee progress over climate-related goals and targets. Most of the companies are still in the

6 Final Report – Recommendations of the Task Force on Climate Related Financial Disclosures, Section C guidance for all sectors, 2017.

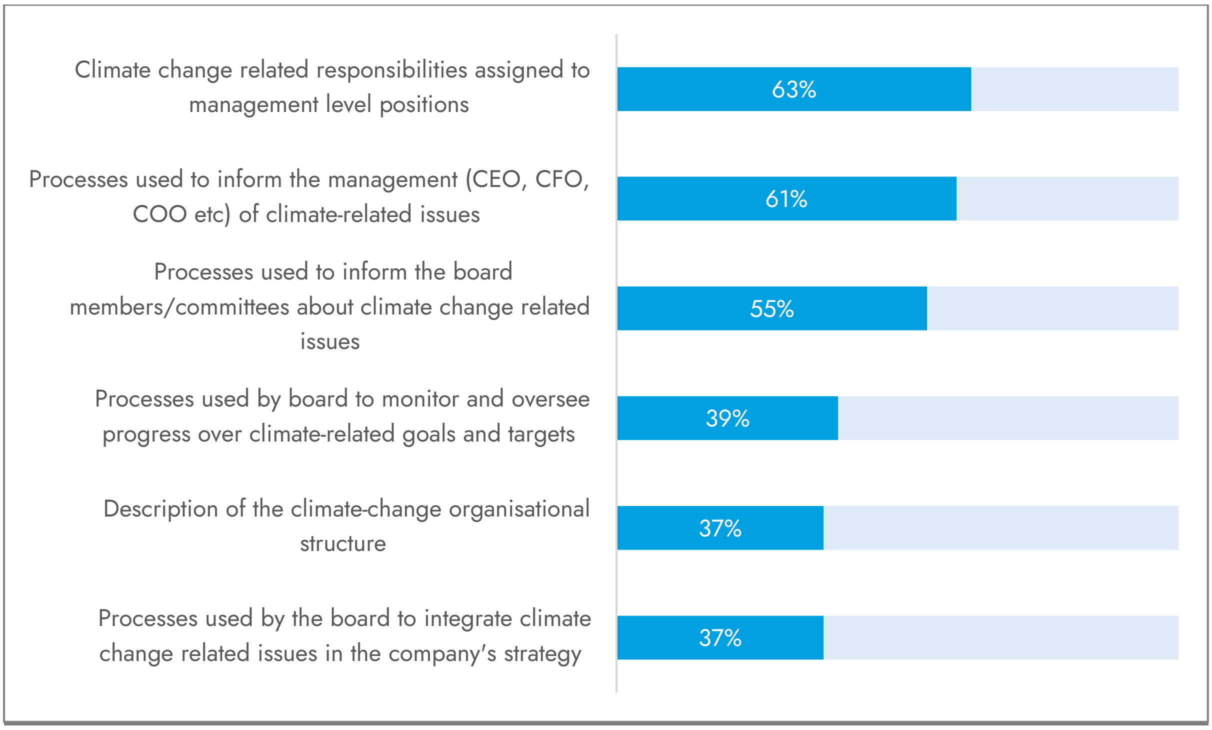
process of defining the climate-relevant targets for their business activity, which contributes to the low reporting of their processes for overseeing these targets.

Figure 1: All Sectors – percentage of panel reporting on Governance indicators



The Diversified Banks sector appears as the most advanced in terms of governance-related climate disclosures. More than half of the banks analysed have allocated climate change responsibilities to management and defined processes to inform the board on climate related issues.

Figure 2: Diversified Banks Sector – percentage of panel reporting on Governance indicators



STRATEGY

We have broken down the assessment of strategy using six indicators[7].

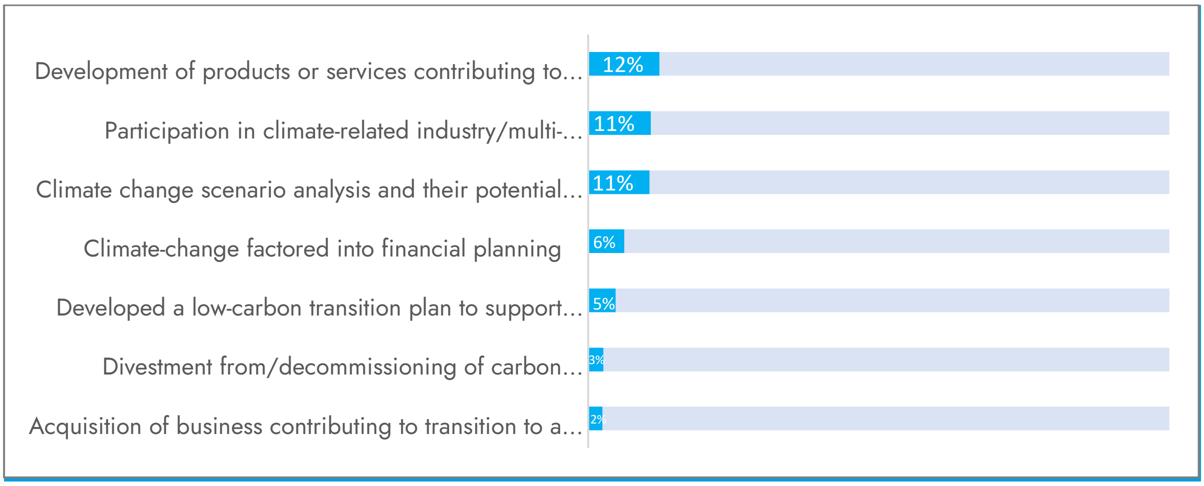
Table 3. Strategy Pillar: Assessment Criteria

Strategy	
TCFD Recommendations	**V.E's assessment indicators**
• Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. • Describe the impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning. • Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	• Development of products or services contributing to transition to a low carbon economy • Acquisition of business contributing to transition to a low-carbon economy • Divestment from/decommissioning of carbon intensive assets/activities • Climate change scenario analysis and their potential impacts on the company's business • Climate-change factored into financial planning • Participation in climate-related industry/multi-stakeholder working groups

Only a minority of companies disclose information about their measures to address climate-related risks and adapt their business models. Climate change is factored into financial planning for 6% of the panel. 12% of companies disclosed the development of products or services that contribute to the low carbon economy, making it the most common disclosure in this category.

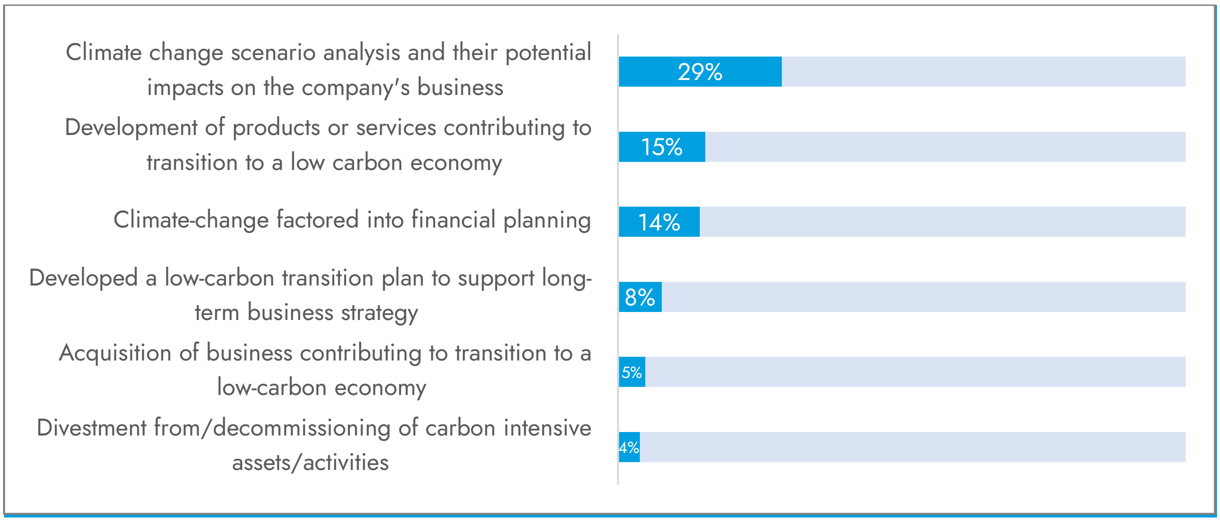
7 Final Report – Recommendations of the Task Force on Climate Related Financial Disclosures, Section C guidance for all sectors, 2017.

Figure 3: All Sectors – percentage of panel reporting on Strategy indicators



The Energy sector is highly exposed to both transition and physical risks.[8] The sector's exposure to transition risk means that many energy companies have already been exploring transition risk scenarios, earlier than many other sectors. Almost a third of the energy companies in the panel have conducted a scenario analysis and provide an assessment of the potential impacts on their business activity. Although many of the companies acknowledge and disclose on their exposure to both physical and transition risk, there are only a few that have visibly factored climate change into financial planning and/or developed a low-carbon transition plan.

Figure 4: Energy Sector – percentage of panel reporting on Strategy indicators

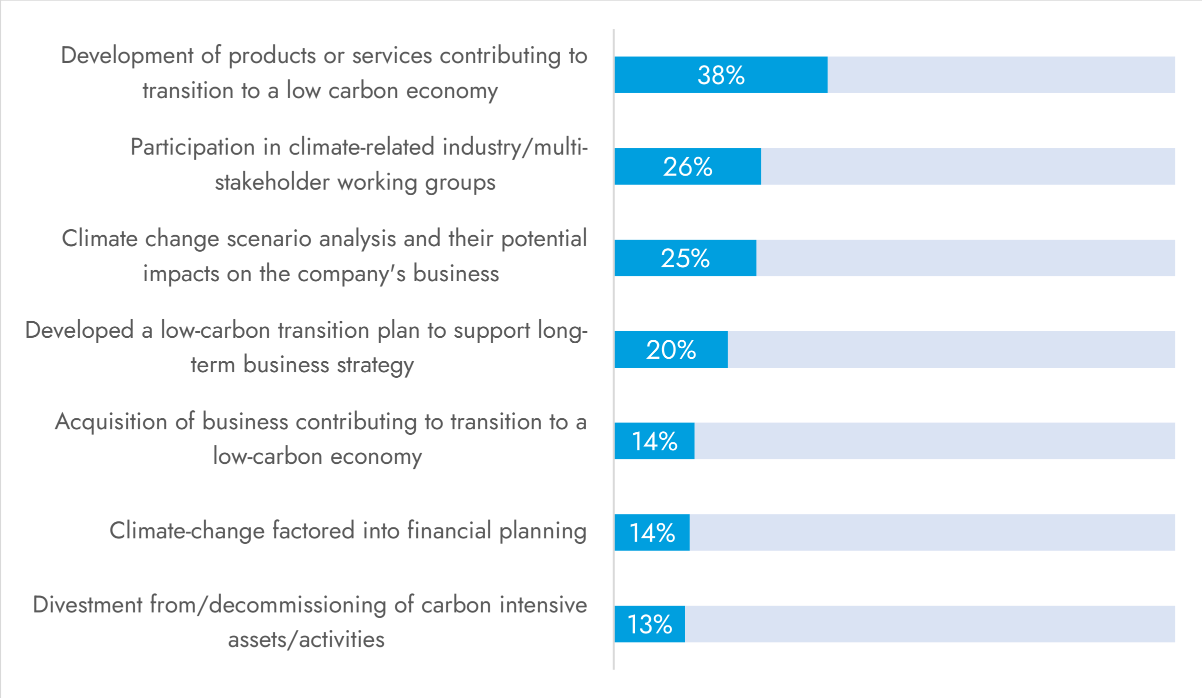


When compared to the Energy sector, the Electric & Gas Utilities sector appears as more advanced in applying the strategy-related TCFD recommendations. The development of renewables-based power generation and "smart" energy demand side management are the most common actions taken by

8 V.E's energy sector is composed of pure play upstream companies (exploration & production, E&P), pure play downstream companies (refining & marketing, R&M), integrated oil & gas companies

companies in this sector. The number of utilities disclosing divestment from or decommissioning of carbon intensive assets or activities is three times higher compared to energy companies. This can be explained by the fact that renewables have become increasingly cost competitive.[9]

Figure 5: Electric and Gas Utilities sector – percentage of panel reporting on Strategy indicators



9 "The global weighted-average levelized cost of electricity (LCOE) of utility-scale solar photovoltaics (PV) fell 82% between 2010 and 2019, while that of concentrating solar power (CSP) fell 47%, onshore wind 39% and offshore wind 29%" - IRENA (2020), Renewable Power Generation Costs in 2019, International Renewable Energy Agency, Abu Dhabi.

RISK MANAGMENT

We have broken down the assessment of Risk Management using 9 indicators[10]:

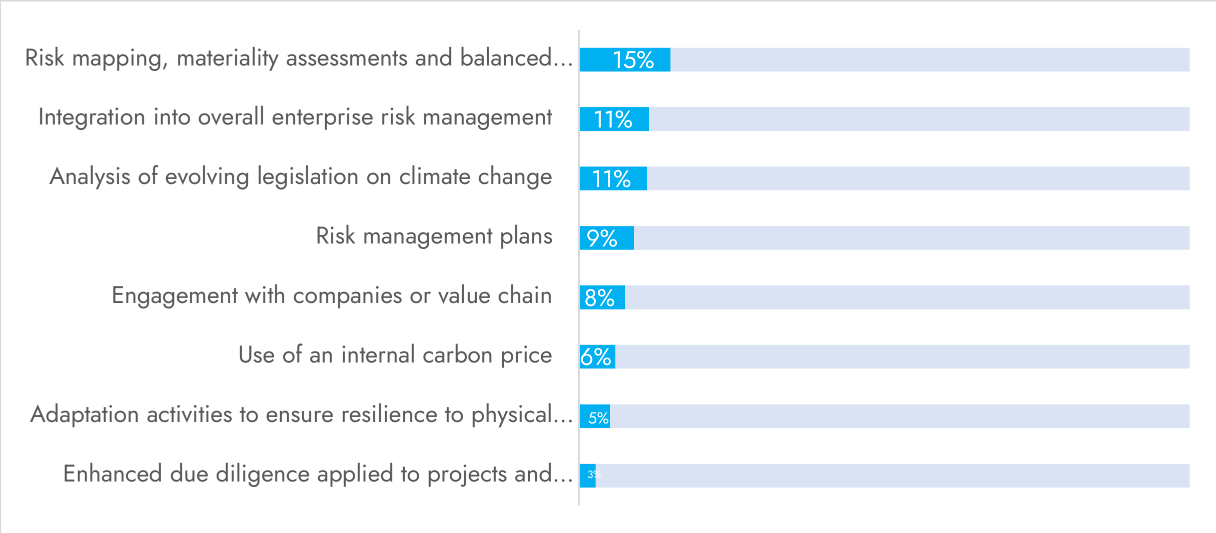
Table 4. Risk Management Pillar: Assessment Criteria

Risk Management	
TCFD Recommendations	**V.E's assessment indicators**
• Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. • Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. • Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	• Risk management plans • Integration into overall enterprise risk management • Developed a low-carbon transition plan • Adaptation activities to ensure resilience to physical impacts of climate change plan to support long-term business strategy • Engagement with companies or value chain • Analysis of evolving legislation on climate change • Risk mapping, materiality assessments and balanced score cards • Enhanced due diligence applied to projects and transaction • Use of an internal carbon price

Overall, disclosure regarding climate risk management appears weak. Only 11% of the panel report having integrated climate risks into their overall enterprise risk management systems. Actions such as due diligence related to transactions and projects as well as engagements with companies across the value chain appear to be adopted by a minority of companies.

10 Final Report – Recommendations of the Task Force on Climate Related Financial Disclosures, Section C guidance for all sectors, 2017.

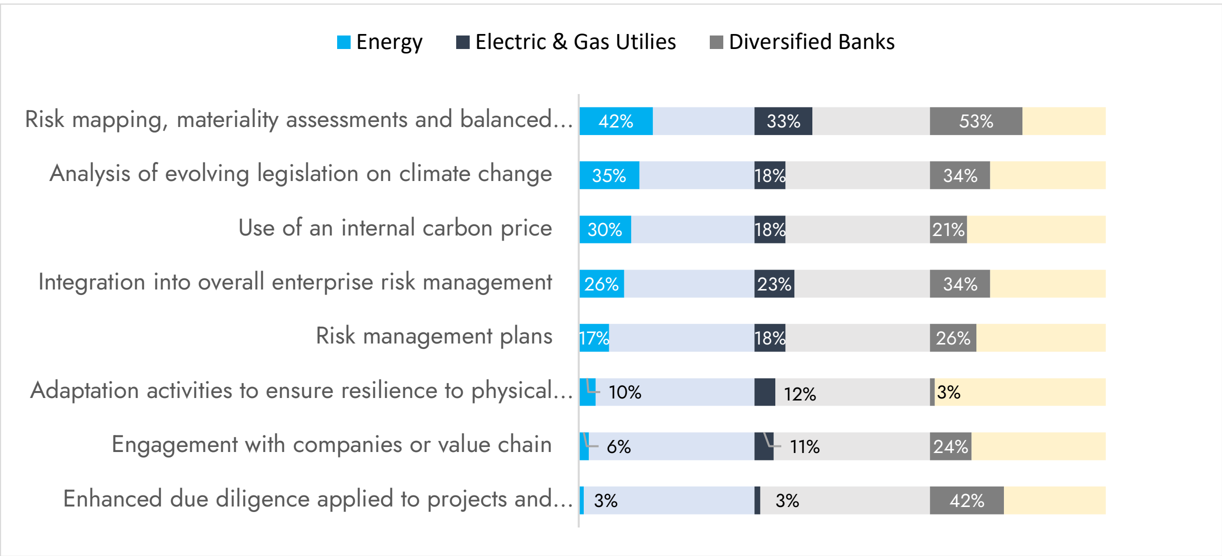
Figure 6: All Sectors – percentage of panel reporting on Risk indicators



Diversified Banks appear to have adopted some climate risk management actions at greater levels than Energy or Electric and Gas Utilities with a third of them having integrated climate risk into the overall enterprise risk management. However, it's important to note that banks are primarily affected by the impacts of climate change on the assets underlying their loans. So the most meaningful risk assessment and risk management from banks and other financial institutions includes an assessment of those underlying assets rather than only the banks' corporate locations.

Disclosure of risk mapping and analysis of evolving legislation is also strong among energy companies, but lower among utilities. About 30% of energy companies and 18% of utilities disclose the use of an internal carbon price, which is set close to the level of carbon market prices at the time of analysis.

Figure 7: Energy, Electric & Gas Utilities and Diversified Banks – percentage of reporting on Risk Indicators

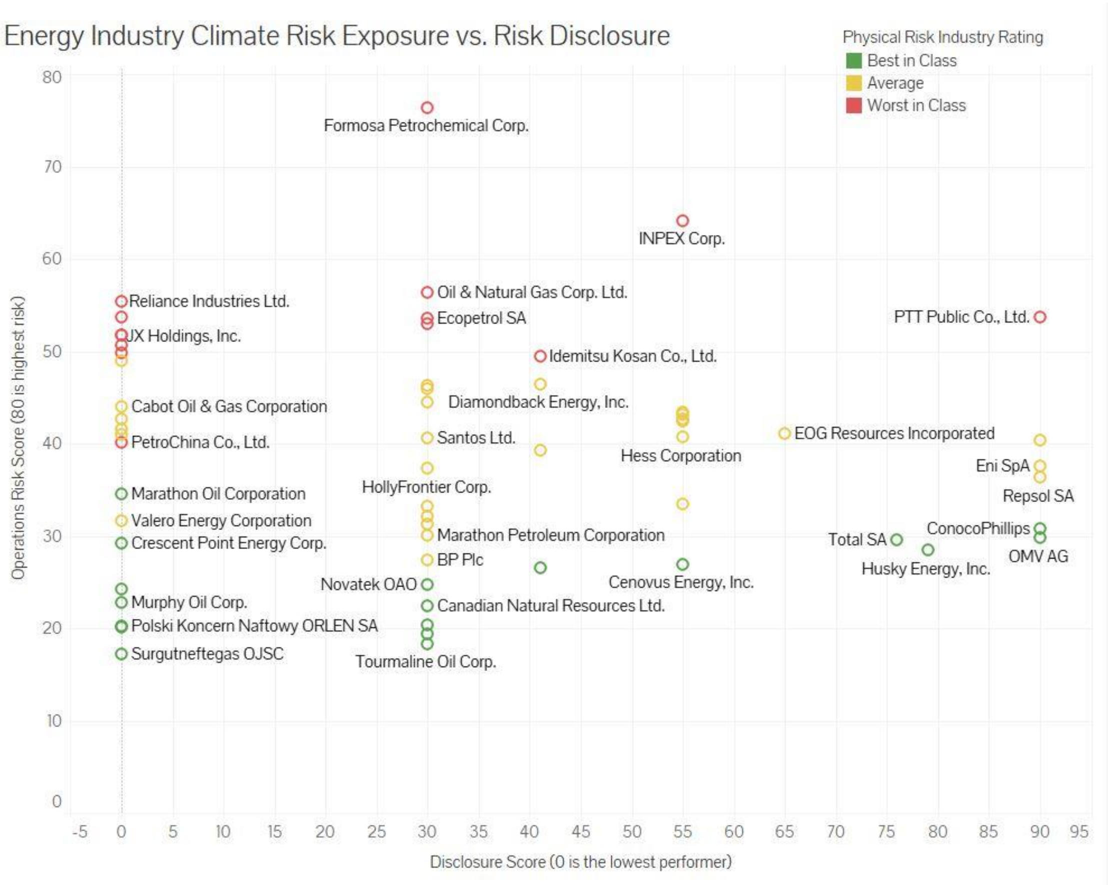


ENERGY SECTOR

The energy sector is highly exposed to both physical and transition risks, making it an interesting sector to examine how climate risk disclosure compares to risk exposure. Understanding the difference between how companies are disclosing their climate risks and how they are exposed to climate risk can provide further insight into the need to improve climate risk disclosures and the data challenges for investors striving to gain a consistent, thorough understanding of companies' risk. We looked at Four Twenty Seven's physical climate risk data to explore how assessed energy companies are exposed to one element of climate risk.

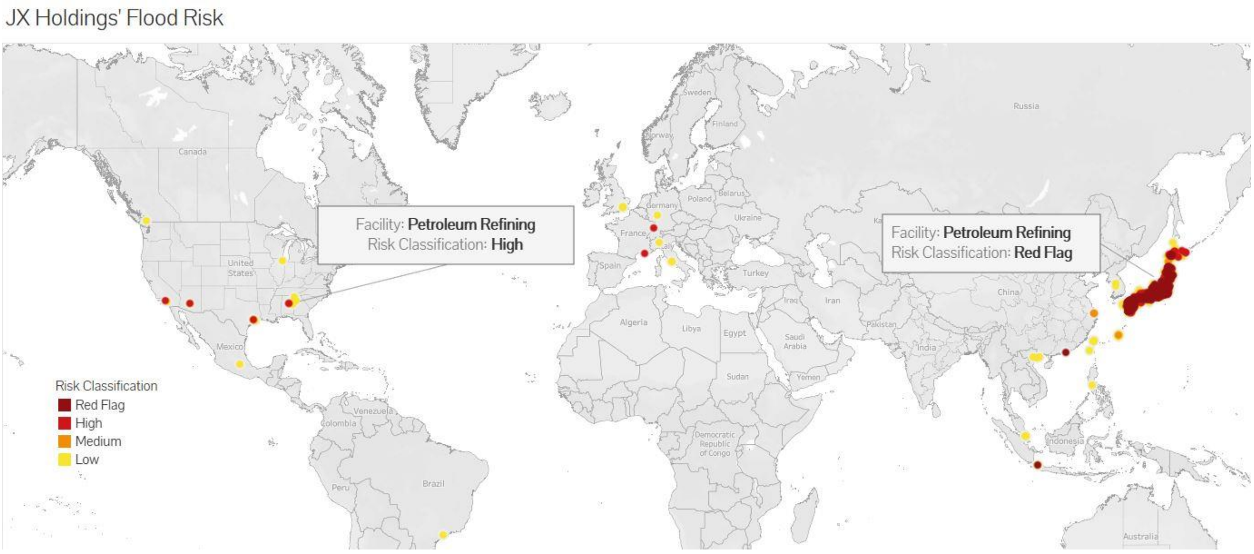
The graph below shows Four Twenty Seven's **Operations Risk** score on the y-axis along with Vigeo Eiris' **TCFD Climate Strategy** score on the x-axis. Operations Risk is based on the geographic location of companies' global facilities and each facility's exposure to floods, heat stress, hurricanes & typhoons, sea level rise and water stress projected to mid-century. The data in this case study is from Four Twenty Seven's Company Climate Risk Scores, which provide physical climate risk exposure information for about 2,000 companies based on a database of about a million underlying facilities.

Figure 8. Energy companies' exposure to physical climate hazards and their climate risk disclosures.



The higher the Operations Risk score the more exposed a company is to physical risks and the higher the TCFD Climate Strategy score the better the disclosures. Companies in the upper left stand out as those with the highest risk exposure but the lowest risk disclosure. Likewise, those in the middle and bottom right are the best performers in terms of disclosure but also have relatively little risk exposure. With one exception, the companies that are high performers for disclosure are also those that have fewer physical risks. Likewise, many of those companies that score the worst-in-class in terms of risk exposure also have limited risk disclosure. This image shows the significant discrepancy between what companies disclose and the ways in which they are exposed to changing climate conditions, which is vital for investors to understand when reviewing disclosures.

Figure 9. JX Holdings facilities' exposure to floods



The map above shows the global facilities of JX Holdings coloured based on their flood risk. The darkest red facilities are the most exposed to floods. As seen in the previous figure, JX has high exposure to physical climate risks, but is one of the lowest performing in terms of disclosure. Of about 2,100 of JX Holding's facilities in Four Twenty Seven's database, an estimated 86% have high or highest risk to typhoons and about 42% have high or highest risk to floods. Storms and floods can cause significant damage to critical equipment that energy companies rely upon, leading to costly disruption. Storms also expose energy companies to reputation risks from oil spills that can accompany such damage. This is one example demonstrating the significant physical risk exposure a company faces due to the locations of its facilities, which is currently not being assessed and disclosed in many firms' climate risk reports.

TOP PERFORMERS

Whilst the overall picture shows clear room for improvement across regions and sectors, several early adopters and best practices are clearly visible from our research.

Table 5: Top Performers

Company	Score /100	Sector	Zone	Country
Saint Gobain	88	Building Materials	Europe	France
Suez	88	Waste & Water Utilities	Europe	France
ERG	88	Electric & Gas Utilities	Europe	Italy
Swiss Re	88	Insurance	Europe	Switzerland
Peugeot	85	Automobiles	Europe	France
Akzo Nobel	85	Chemicals	Europe	Netherlands
Fortum	85	Electric & Gas Utilities	Europe	Finland
UBS Group	83	Diversified Banks	Europe	Switzerland
ENI	83	Energy	Europe	Italy
Osaka Gas	81	Electric & Gas Utilities	Asia Pacific	Japan
Teck Resources	81	Mining & Metals	North America	Canada
Eurazeo	81	Financial Services	Europe	France
DWS Group	81	Financial Services	Europe	Germany
Naturgy Energy Group	81	Electric & Gas Utilities	Europe	Spain
Duratex	81	Building Materials	Emerging	Brazil
Dexus	81	Financial Services - Real Estate	Asia Pacific	Australia

CONCLUSIONS

At their core, the TCFD's recommendations are a set of business strategy and risk management exercises which, if applied, allow companies not only to identify and report their climate risks to their stakeholders, but more importantly to take action where needed and define a climate resilience plan.

The results presented in this report suggest that progress is being made towards better quality and more granular climate risk-related disclosures but at a slow pace. Many companies issue specific TCFD reports but TCFD-related information is often found across different sources (annual and sustainability reports), making it more challenging for investors to know where to access this information. Likewise, there is still a significant discrepancy between how companies are exposed to climate risks and what they report. Finally, despite the slow start, it is evident that the framework has been successful in having a global footprint and helping elevate climate risk disclosure as an essential part of a resilient financial system.

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ABOUT

Vigeo Eiris is a global leader in ESG assessments, data, research, benchmarks and analytics. Leveraging our extensive proprietary database, we equip market players with the ESG insight they need to manage risks and better understand and address their social and environmental impact. Vigeo Eiris has an industry unique ISO 9001: 2015 quality certification for its processes relating to methodology, assessments, sale and delivery of its data to all types of investors and issuers. Vigeo Eiris is a Climate Bonds Initiative Verified Provider of Second Party Opinions. With a team of nearly 300 experts of 30 different nationalities, Vigeo Eiris is present in Paris, London, Brussels, Casablanca, Hong Kong, Milan, New York, Rabat and Santiago.

Four Twenty Seven, is a leading publisher and provider of data, market intelligence and analysis related to physical climate and environmental risks. Our mission is to catalyze climate adaptation and resilience investments by enabling the integration of climate science into business and policy decisions. In July 2019, Four Twenty Seven received a majority investment from Moody's Corporation.

Since 2019, Vigeo Eiris and FourTwentySeven have been Affiliates of Moody's Corporation.

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