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In June 2017, the industry-led G20 initiative, the Task Force on Climate-related Financial Disclosures (TCFD)*, released its final recommendations.

The TCFD is spearheaded by Mark Carney, Governor of the Bank of England and Head of the Financial Stability Board (FSB) of the G20, and former New York Mayor, Michael Bloomberg.

The recommendations aim to help businesses and organizations take account of climate-related issues and disclose the financial impact that climate risk has or could have on their organizations.

The recommendations address a number of major challenges identified by the TCFD: principally, the lack of a coherent financial reporting framework, making it difficult for investors, creditors and underwriters to use existing disclosures in their financial decisions. The adoption of the recommendations is voluntary and suggested for all entities.

There is also additional focus and specific guidance for certain higher-risk sectors in both the financial sector (e.g., banks, insurance companies, asset owners and assets managers) and other sectors (e.g., energy, transportation, material and buildings and agriculture, food and forestry products).

Specific categories for climate-related risks, including risks related to the transition to a zero-carbon economy and risks related to the physical impacts of climate change, are also outlined in order to enable consistent categorization.

The TCFD’s recommendations provide organizations with an opportunity to apply a more rigorous and consistent approach to assessing and disclosing the financial impact of climate risks in their reporting. All of the members of the TCFD, including the Norwegian companies DNB and Norsk Hydro alongside Barclays, BHP Billiton, Dow, Eni, Swiss Re, AXA, and others, have been active in the process of drafting the final report and remain committed to the disclosure recommendations.

In total, 400 global investors, managing more than US$25 trillion have signed a statement of support for the TCFD recommendations.

EY has reviewed corporate disclosures in Norway to produce this report. We have benchmarked the high-risk sectors listed in the recommendations against each proposed disclosure. This helps us to map improvements in climate-related disclosures against the recommendations by sector on an annual basis.

The companies surveyed were drawn from the Oslo Stock Exchange Benchmark Index (OSEBX) top 50 listed companies, plus five of the largest listed banks, which were evaluated against the sectors identified by the TCFD as most exposed to climate-related risks. Several of the OSEBX companies were excluded as they did not fall within these sectors.

On the basis of the selection criteria, a total of 45 companies were assessed (refer to the breakdown of companies assessed by sector in the table to the right).

The TCFD recommendations are structured around four thematic areas that reflect core elements of how organizations operate – governance, strategy, risk management, and metrics and targets (as shown on the right).

Companies were scored against their performance in a total of 11 disclosure categories defined from the core TCFD disclosure recommendations for climate-related financial disclosures (as shown below):

- Not publicly disclosed
- Limited discussion of the aspect (or only partially discussed)
- Aspect is discussed in detail
- Identified in the report as a key material issue or aspect

The findings are based on disclosures in annual reports, sustainability reports and any other publicly available information, such as company websites, and where available, a company’s disclosures in relation to the Climate Disclosure Project (CDP).

Core elements of recommended climate-related financial disclosures:

**Governance**
The organization’s governance around climate-related risks and opportunities

**Strategy**
The actual and potential impacts of climate-related risks and opportunities on the organization’s business, strategy and financial planning

**Risk management**
The processes used by the organization to identify, assess and manage climate-related risks

**Metrics and targets**
The metrics and targets used to assess and manage relevant climate-related risks and opportunities

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*For the purpose of this report, these sectors were regrouped where distinctions between categories could not be determined or where further sub-sector analysis was useful.*

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Key findings

Average performance against the recommendations by sector

- Materials and buildings: 39%
- Energy: 33%
- Agriculture, food and forest products: 26%
- Transport: 6%
- Banks: 19%
- Insurance, and asset owners and managers: 21%

26% average for nonfinancial

20% average for financial

Average performance against the recommendations by disclosure category

- Metrics and targets: 26%
- Governance: 30%
- Risk management: 27%
- Strategy: 19%
Disclosure of metrics did not always match the key risks identified by the entity

When making disclosures, many entities reported scope 1 and scope 2 greenhouse gas (GHG) emissions only. However, the disclosure of these emissions did not always align with the key climate risks that the entities had identified as being most material to their organization. Somewhat worrying is the fact that some of the Norway’s largest GHG emitters did not report on emissions at all. This discrepancy can also lead to poor integration of climate change risks into strategy.

Entities should be looking to identify, assess and report on metrics related to important risks that they face. Not just for their own resilience strategies, but also to show to customers, shareholders and investors that they are mitigating and adapting to these risks to minimize their consequences across the value chain. For the finance sector, this may involve disclosing the emissions from investments and lending operations or for energy companies, this could be the emissions from the end use of their products. In the sectors where climate change is likely to affect asset prices and revenue models, a small number of entities have made disclosures on the financial impact of climate risks either in their CDP response or corporate reporting.

To address climate risk adequately, it is also imperative to take into account risk factors outside the organization. However, few companies reported on risks related to scope 3 emissions (originating from input factors and services from outside the organization) and few featured any comprehensive description of climate risk assessment found in the supply chain.

Companies have a long way to go in all categories of the recommendations

The central finding of this assessment is that companies are not currently producing comprehensive climate risk reporting that would meet the recommendations established by the TCFD. In fact, for some high-risk sectors, the reporting fails dramatically short, particularly for transport and shipping. This goes contrary to the observations in EY’s global survey of investor expectations, “Tomorrow’s Investment Rules 2.0.” EY, 2015. Here, one in four investors (27%) indicate an expectation of dramatic improvements in organizations’ disclosures on climate risk and how they’re being managed.

Lack of disclosure around the impact of a 2°C warming scenario

Most entities are yet to report on the potential impact that different climate scenarios, including 2°C warming scenarios, could have on the entity’s business, strategy and financial planning. Only two of the entities disclosed any information on this area, despite many more acknowledging the global consensus around keeping global warming below 2°C.

Example scenarios, all consistent with a 2°C future:

Strong national action
In this scenario, a lack of global carbon trading requires each country to take ambitious action individually, requiring a more rapid domestic transition. National action drives technical innovation in renewables, and carbon capture and storage.

Global cooperation
In this scenario, coordinated global action results in a smooth transition to a low-carbon economy. Access to an international carbon trading system will provide relatively cheap carbon permits compared with the other scenarios.

Delayed action
In this scenario, an initial delay toward action is followed by a much more accelerated mitigation pathway after 2030. This scenario assumes slower cost reductions of low-carbon technologies due to lack of early investment and a rapidly increasing carbon price post 2030.

CDP reports are the best source of information on climate-related risks

The analysis indicates that the entities that reported to the CDP often led their peers in this report, which is likely to be driven by the structured nature of the CDP questionnaire. For example, the section of the CDP questionnaire relating to governance, strategy, and risk and opportunities aligns closely to the TCFD recommendations for these areas. This requires companies to consider providing more detailed information compared with the disclosures made for typical corporate reports. Some companies reported to the CDP, but had not made their reports publicly available and therefore, these reports were not considered, but could have substantially affected the scores.

For a majority of the entities included in this report, we identified a degree of misalignment between the disclosures made in the CDP submissions and the organizations’ broader corporate communications, including the annual report, sustainability report or investor presentations. Very few companies had, for instance, identified climate change risks in the risk disclosure section of their annual report, despite a number of companies listing major climate risks in their CDP reporting.

Transport at a crossroad

Of all the sectors assessed, transport, mostly consisting of shipping and aviation, received the lowest scores and had the highest number of non-disclosures. This leaves investors in the sector poorly informed as to how the companies plan to deal with rapidly changing circumstances, including climate change as one of the main drivers. Regulators across Europe are looking to find ways of curbing the large emission contribution of the transport sector, something that could put direct pressure on current business models. Climate change could also have direct physical impacts on transport through, for example, extreme weather events or the opening of new shipping routes in the Arctic, which could have a strategic impact. While many of the shipping companies are heavily exposed to changes in demand for fossil fuel transportation, virtually all failed to report on any potential impacts from climate change policy.

Financial sector lagging

Overall, the entities listed within banking, insurance and asset owners and managers fell behind the level of disclosure seen in the nonfinancial sectors. This was predominately because of the large number of companies that disclosed no climate-related information. The average score was lifted by a few champions, which displayed a high level of detail in their disclosure of climate risks, strategy and governance. This finding puts the Norwegian banking sector in contrast with international trends, where the banking sector is often seen as leading in their climate risk disclosure, taking a broad view of exposure to include climate risk factors in both credit and investment portfolios. This could be particularly worrying given the potential for large climate risk exposure for the Norwegian banking sector to the Norwegian fossil fuel industry through loans and investments.

Managing transitional risks through carbon pricing

Overall, the majority of companies assessed highlight what can be called transitional risks, that include technological, societal or regulatory changes arising from the transition toward a low-carbon society. Chief among this type of risk is the prospect of a rise in carbon prices, either through taxation, emission trading schemes or by direct regulations, especially on emissions-intensive sectors. For business, it will be imperative to manage such a transition in a gradual and proactive way, that will reduce sudden and unplanned financial losses. A business strategy that can be used to manage this is the implementation of an internal carbon price, either as a direct internal tax, drawing resources to, for instance, a transition fund, or indirectly, as a shadow price and stress testing tool. Only three companies in the assessment have been, or are in the process of, implementing such a policy to manage their transitional risks.
Banks

Sector overview
Six entities were assessed in this sector. The results show a range of different performances, with the highest scorer DNB achieving a rating of 78%, being the only bank reporting to CDP. However, for the rest, the score was significantly lower, with two banks scoring under 20%, and one bank at a zero rating, leaving much room for improvement on climate risk disclosure.

Areas of improvement:
- Disclosing the financial impact of a 2°C scenario
- Widening the scope of financed emissions metrics to apply to investment and credit portfolios
- Improving disclosures around risks

Governance
Only two of the six banks report that climate change is included in their risk frameworks, and subject to regular overview and discussion with members of the board. These banks also report on the governance structures for climate risk and sustainability, with designated risk committees and clear assignment of responsibility up to the level of CEO, receiving near top marks in the governance category. The remaining banks, however, do not specifically mention climate change or sustainability in either governance or risk management disclosures and hence receive scores of zero.

Strategy
An apparent division is seen between the one bank, DNB, that reports to the CDP, and the remainder that have not participated. DNB discloses clear risk management horizons, and identifies several risks and opportunities as part of its CDP reporting. While the non-CDP banks are largely lacking any disclosure of climate change strategies, some provide passing mention of climate change as a possible long-term risk, but without any further elaboration. Overall, none of the banks disclose details for scenario modeling or other stress tests used in relation to climate change.

Risk management
For risk management, the same division is observed. As part of their CDP reporting, DNB discloses its responses to the identified climate change risks, which are connected to the company’s overall strategy. Furthermore, in the annual report and on company websites, there are detailed explanations of the risk assessment approach conducted as part of a materiality assessment for external reporting. The non-CDP-disclosing banks have less detailed disclosures, but do reference some climate considerations in either credit policy or investment policy.

Targets and metrics
Only one bank discloses their scope 1 and scope 2 emissions, and have generally detailed use of metrics for environmental and climate change-related issues through the Global Reporting Initiative (GRI) framework. The remaining banks do not disclose in sufficient details on climate emissions or on other indicators. Although they are referenced as areas of concern in several annual reports, no performance indicators or targets are reported. None of the banks in the survey utilize carbon pricing as a tool for climate change risk management. Moreover, none of the metrics used extend to risk factors in either credit, investment or otherwise.

Top performer: DNB
The highest-performing bank is DNB, which reports on a number of indicators connected to sustainability criteria in investment and credit. However, DNB does not give a detailed account of portfolio climate risk exposure or scope 3 emissions. On the other hand, DNB has recently committed to develop their risk indicators further by joining the United Nations Environment Programme – Finance Initiative (UNEP FI).
Insurance, asset owners and managers

Sector overview
Since there were only two companies listed exclusively as insurance companies, it was decided for this assessment to include them in the evaluation of asset owners and managers. This also makes sense given considerable sectoral overlap. Combined, the two sectors make up a total of six companies. The overall assessment is that performance is lagging, with the second lowest score of any sector, despite two companies reporting to CDP.

Areas of improvement:
- Disclosure of carbon footprint of investment
- Quantitative mapping and assessment of climate risk, particularly in the external value chain and scope 3 emissions
- Integrating climate risk into general investment strategy

Governance
Only two of the included companies disclosed any information regarding board oversight over climate-related risks and opportunities. Regarding the management approach to climate change risk, only one company reported having a clear assignment of responsibility, with the head of sustainability reporting to the COO and to the general management twice per year.

Strategy
Climate change risk and opportunities rarely feature in the risk disclosure of the surveyed companies. Asset owners and managers do reference some risk strategy, but mainly to the extent that they monitor certain companies in their portfolios, without any overriding strategy or climate change scenario.

Risk management
Only one of the companies assessed has adequately described its process for identifying and managing climate-related risks, using a risk-mapping software, in addition to regular portfolio oversights. The remainder of companies have limited description of risk managing processes and over half have no mention at all of climate change as part of their disclosure on risk. Only one of the insurance companies reviewed claimed to include climate change in its general management of risks, but provided no description of how this works in practice.

Targets and metrics
Only the companies reporting to CDP disclosed scope 1 and scope 2 emissions. One of these also included a detailed description of their scope 3 emissions, including emissions from investments and leased assets. Only a few companies disclose any other metrics, targets or goals related to climate change, environmental management or performance.

Top performer: AustralianSuper
Investment fund AustralianSuper received top marks in the “Climate Risk Disclosure Barometer,” EY in Australia, 2017, connecting meaningful metrics and indicators to key sector risks. Examples are, energy efficiency and climate change adaptability criteria when acquiring new assets, or using the Global Real Estate Sustainability Benchmark (GRESB) to assess the Environmental, Social and Governance (ESG) performance of real estate assets.

Transport

Sector overview
The transport sector features the lowest overall score of all sectors in the survey, where only one out of the six companies assessed received a rating above 10% and only two companies report to the CDP.

Despite recognizing risks connected to climate change regulation, limited efforts were made to disclose on impact or mitigation strategies. Indeed, most companies reviewed do not even disclose basic sustainability indicators or emissions statistics.

Areas of improvement:
- Establishment of climate and environmental strategy and governance
- Disclosure of indicators related to emissions and environmental performance
- Integration of climate risk into general risk framework

Governance
No companies in the transportation sector disclose any description of board oversight of climate-related risks and opportunities, nor do they describe the management’s role in assessing and managing climate-related risks and opportunities.

Strategy
Only two companies disclose anything related to climate risks, highlighting the risk of climate legislation and the importance of compliance to various maritime and environmental regulations, but without going into any particular detail. While these risks are not reported as part of the overall company strategy, some mention is given to the importance of energy efficiency as a cost-saving initiative.

Risk management
None of the companies disclose anything concerning their processes for managing climate risks, or describe in any detail how they would proceed for identifying, assessing or managing such risks. Two companies do mention something related to environmental and emissions performance for fleet managers as a way to ensure compliance with environmental protection obligations, but they do not address this in specific detail or in relation to business risk.

Targets and metrics
Of all the assessed companies, only one discloses any metrics concerning climate-related risks or opportunities, reporting on total fuel consumed and emission intensity. The remaining companies do not disclose or mention consideration for any metrics or indicators related to environment or climate change issues.

Top performer: Brambles
While the Norwegian transport sector is lagging, “Climate Risk Disclosure Barometer:” EY in Australia, 2017*, found several top scorers. Logistics company Bramble Limited disclosed both on risk related to transitional factors, such as rising fuel costs and climate policies, and also to physical climate risks, such as the financial impact of both recent and future extreme weather events.

Energy

Sector overview
Ten companies in total are included in the energy sector, of which the majority are operating in oil and gas, and two in the power sector. Of the included companies, seven report to CDP, with strong overall results. The same is also reflected in the score against the TCFD recommendations, where the assessed companies receive high marks and generally display high awareness of climate-related risks and opportunities. While the oil and gas companies overall have weaker performances than power companies, Statoil stands out as a climate risk leader, with detailed disclosure on risk factors and how they are managed.

Areas of improvement:
• Closer linkage of climate risk and company strategy
• More thorough description of risk management processes
• Enhanced use of metrics for climate change and environmental performance

Governance
The companies receiving the highest marks for governance have established committees or subcommittees to regularly oversee climate-related risks and opportunities, with a clear delegation of responsibility among company management. While most companies fulfill these criteria to a high degree, four of the seven oil companies fail to do so in any capacity.

Strategy
Most of the companies surveyed disclose to an adequate degree on climate-related risks related to transition. However, reporting is insufficient with regards to opportunities or physical risks from climate change. Furthermore, little is disclosed on the impact of risk on overall company strategy, where most companies rely on the assumption that the energy business itself is intrinsically connected to climate change. Statoil is the only company receiving top marks, reporting a bottom-up risk assessment approach, which is implemented into the company strategy through use of scenario modeling and internal carbon pricing.

Risk management
While most companies list some climate-related risks, they are, to a certain degree, lacking in detail and specific information about how they pertain to the company specifically. Fewer companies disclose on risk identification processes and how these risks are connected to overall risk management. Two companies still received top marks for detailed risk disclosures, which describe both existing and future risk factors, their estimated financial implications as well as strategic implications.

Targets and metrics
Most companies provide disclosure on metrics for climate-related risks and opportunities, as performance metrics in the energy business are more closely aligned with climate change risk itself. However, the companies do not disclose their own emissions or other relevant climate performance indicators.

Top performer: Statoil
Among the energy companies, Statoil stands out as the best discloser. A detailed climate change scenario presents a narrative for future risks and challenges related to both transitional and physical impacts of climate change. Statoil also applies a carbon pricing system, where a shadow price is used to stress test new projects relative to different carbon price levels.
Materials and buildings

Sector overview
The largest sector, with 12 companies assessed, the materials and building sector is also the overall highest-performing sector with regard to disclosure of climate change-related risks, with half of the companies also publishing CDP reports. Most of the companies identify risks and opportunities related to both physical and transitional impacts of climate change, particularly energy efficiency issues. The best performers disclose detailed risk assessment frameworks, with thorough description of financial impacts and management of climate risk factors.

Areas of improvement:
- Disclosure of scope 3 emissions
- Extend risk management description to better disclose on supply chain risks
- Use of scenarios to convey climate risk factors

Governance
A total of three companies receive top marks, Kongsberg Gruppen, Veidekke and Norwegian Property, describing in detail the board’s oversight procedures for climate-related risks and management’s role in assessing and managing these risks. However, four companies receive zero marks for governance, with no mention of climate risk in their reporting on corporate governance.

Strategy
The best performers report in detail on several risks connected to climate change. One uses a framework based on global megatrends, including climate change, to derive what influence these might have on the company. These assessments are then integrated into the general strategy of the company. Particularly, Kongsberg group displays a sound integrated model. However, none of the companies disclose scenarios or similar analysis used to assess climate-related risks.

Risk management
Processes for identifying and managing climate-related risks and opportunities were generally consistent with the entities’ overall risk management processes. One of the companies assessed utilizing a carbon pricing system and another reports that it is in the process of implementing one. Energy efficiency and physical climate effects were the most common climate-related issues, identified as both risks and opportunities.

Targets and metrics
The companies in this sector generally perform well in their disclosure of energy and emission-related metrics. This is in line with their business strategy and risk evaluations, which generally list energy efficiency improvements as an opportunity. However, little attention is paid to scope 3 emissions and supply chain considerations.

Top performer: Kongsberg Gruppen
Kongsberg Gruppen utilizes a risk management approach, where key drivers, such as population growth, urbanization and welfare, result in climate change and ecological issues. The global impacts of climate change are then aligned with opportunities for business areas through technological innovation and adaptation technologies.
Agriculture, food and forestry products

Sector overview
Six companies were assessed in this sector, where the majority are engaged in aquaculture. Half of the companies also report to CDP, receiving markedly higher scores. The three non-CDP-disclosing companies received overall scores well below 10%. Overall, the companies are aware of sustainability risks and issues that are connected with operational risk. However, little is done to consider these risks in conjunction with climate change.

Areas of improvement:
- Development of overarching strategic framework for climate change
- Alignment of operational risk and physical climate change risk
- Defined governance for climate change issues

Governance
No companies receive high scores for governance because of a lack of clarity on who has the overall responsibility for their climate change efforts. However, the higher-scoring companies all indicate some risk management procedures. Common to some of the aquaculture companies is the use of R&D officers to manage environmental issues, such as water temperature and weather, which intersect between fish farming operations and climate change.

Strategy
The CDP reporting companies list several risks and opportunities related to climate change, though little detail is provided as to the actual financial implications. On the management side, the companies list initiatives to manage environmental issues, but mostly from an operational perspective and with lacking contextualization into overarching climate strategies.

Risk management
The reporting on risk management provides adequate disclosure of risk, but remains unclear as to how the identified risks are managed. This is consistent with the lack of strategic integration of climate risk. Top marks on risk identification is given to one company that maps out climate risks as a sub-category of operational risk and systematically presents physical climate change risks identified through a sustainability materiality analysis.

Targets and metrics
Reporting companies receive moderate scores for metrics and targets, disclosing scope 1 and scope 2 emissions. Little effort is made regarding scope 3. Aquaculture companies actively report on sustainability metrics connected to farming operations and indicators indirectly connected to climate change risk. But, little direct linkage is made to an overall risk management strategy.

Top performer: Walmart
According to the UN Intergovernmental Panel on Climate Change (IPCC), the primary product sectors will experience transformative impacts because of climate change. Global retailer Walmart* has been leading in mapping the physical climate change risk impact in its supply chain, cooperating closely with its partners to ensure mitigation. While Walmart is a global retail leader, the risk approach can be translated to producers or more localized businesses.

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To read more about how you can futureproof your business, see the EY’s step-by-step guide to implementing the TCFD recommendations.

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