White Paper

DISCLOSING CLIMATE-RELATED FINANCIAL RISKS AND OPPORTUNITIES: ARE BUSINESSES READY FOR TCFD?

Purpose of Investigation

The recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) are an important step towards mainstreaming disclosure of climate-related risks and opportunities in financial filings, and enabling companies and investors to better manage the transition to a low-carbon, resilient future.

Many businesses are grappling with the implications of the recommendations, particularly in terms of identifying relevant internal systems, metrics, and disclosure strategies. South Pole surveyed corporate clients on their drivers, preparedness and plans for TCFD disclosure. This white paper provides an indication of the current state of play among surveyed companies and insights into what this might mean for businesses at large.

SURVEY HIGHLIGHTS

Almost two thirds of responding corporations recognise the first mover advantage of early TCFD implementation, but less than one in ten have decided on a disclosure strategy

There was wide recognition of the other advantages of TCFD disclosure, in particular satisfying investors, reputation and better managing risks and opportunities

For almost half of respondents, responsibility for TCFD disclosure still sits within the CSR department, rather than the Board

More than three quarters of respondents are currently unsure when they will align disclosure with TCFD guidelines

Four out of ten respondents believe TCFD will enable companies to better understand the physical and transition risks associated with climate change, but only a quarter of businesses have created scenarios to explore how these risks will affect them

Disclosure of climate-related risk

Climate change poses a significant threat to societies and businesses globally, due to more frequent and extreme weather events and chronic physical impacts, such as temperature rises. The Paris Agreement aims to decarbonise the economy and promote the deployment of clean technology. Associated transitional risks – such as a drop in demand for carbon-intensive products, carbon pricing, regulation and market disruption – is already affecting investments.[1]

These Climate-Related Risks (CRRs) affect business assets, and many can translate into financial losses. This has become more recognised as the focus on Environmental, Social and Governance (ESG) criteria, carbon disclosure, and shareholder demands increase. Despite rising up both the investor and corporate agenda, CRRs are often not assigned the materiality they deserve and rarely find their way into financial reports. However, several official interventions have addressed this issue, including Article 173-VI in France[2], and the Climate Risk Management Carbon initiative, in California, requiring 3,500 insurance companies to reveal their investment in carbon-intensive sectors.

Nevertheless, it was recognised by the G20's Financial Stability Board (FSB)[3] that these piecemeal disclosure responses were insufficient to meet the needs of the investor community. To encourage disclosures that would allow for more adequate pricing of climate risks into assets and hedge against market instability, the Task Force on Climate-related Financial Disclosures (TCFD) was established.

Common Abbreviations

CDP	Carbon Disclosure Project
CRR	Climate-Related Risk
CSR	Corporate Social Responsibility
ESG	Environmental, Social and Governance
FSB	Financial Stability Board
GHG	Greenhouse Gas
TCFD	Task Force on Climate-related Financial Disclosures

Key considerations for business leaders

- Climate and carbon risk disclosures are increasingly influencing asset manager decisions on whether to buy, sell or hold securities
- Leading companies will disclose against new climate and carbon disclosure recommendations created by the Financial Stability Board's TCFD in 2018
- Companies not disclosing climate-related risks run the risk of missing out on investment and being at a competitive disadvantage

Figure: The four elements of the TCFD recommendations

Today, many businesses are grappling with the implications of the TCFD recommendations, especially when it comes to decisions on internal governance and risk systems, metrics, and disclosure strategies. They are assessing climate and carbon financial risk, and the opportunities of a transition to a low-carbon economy.

[1] CDP (2017)
[2] French Sustainable Investment Forum, FIR (2017)
[3] Chestney, N. (2016)

Task Force on Climate-related Financial Disclosures (TCFD)

The TCFD was launched in December 2015, following a speech by the Bank of England Governor, Mark Carney, on the 'Tragedy of the Horizon', where he outlined the threat posed by stranded assets to the global financial system. Its 32 business representatives, backed by over 100 of the world's biggest investors and corporations, and supported by Michael Bloomberg, aim to ensure consistent and transparent financial disclosures on climate-related risks.

In June 2017 a widely-endorsed framework was published for reporting on four elements: climate risk management, strategy, governance, metrics and targets. The framework distinguishes physical risks from the transition risks arising from decarbonisation.[4] It also recommends scenario development to understand the potential impact of future risks, including a 2°C warming pathway. Disclosure is encouraged from 2018 onwards in mainstream filings, such as financial reports.

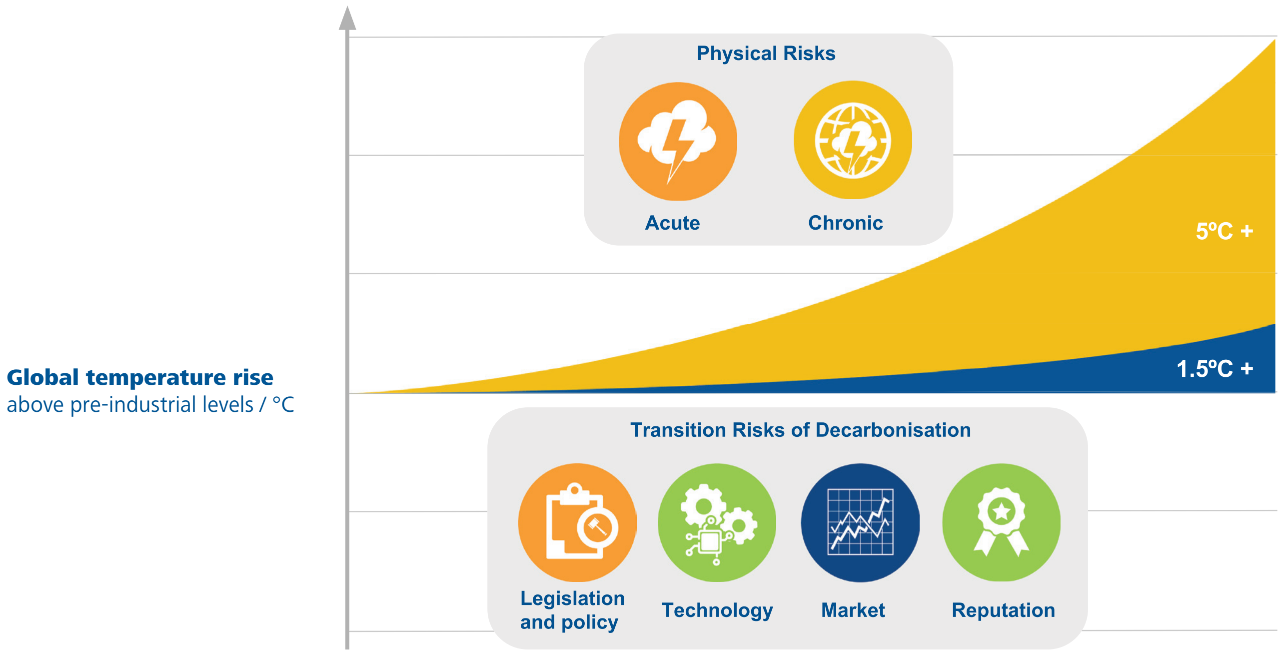
Transition risks

The carbon bubble
To meet the Paris Agreement's target of a 2°C global temperature rise from pre-industrial levels, scientists have modelled that approximately one third of oil reserves, half of gas reserves and over 80 per cent of current coal reserves should remain unexploited from 2010 to 2050. This will result in significant 'stranded assets' - unrealised development of capital investment. For a 2°C rise in temperature by 2100 an estimated US$1.7 trillion share of global financial assets would be at risk due to the negative implications of climate change.[5]

Physical risks

Climate-related physical risks include chronic warming impacts such as drought, sea level rise, and increased rainfall. Acute effects include extreme weather events such as tornadoes and heatwaves. These can affect the assets and supply chains of businesses, particularly those in vulnerable locations and those reliant on water, such as agricultural supply chains. Such weather events and impacts can be challenging to assess as they are by nature unpredictable and vary in magnitude, and their frequency is also expected to increase.

Figure: The physical and transition risks of climate change are expected to grow and increasingly disrupt business operations and supply chains. Their magnitude will depend on the warming and decarbonisation pathways chosen.



[4] Moliterni, Fabio and Pareglio, Stefano (2017)
[5] Dietz, Bowen, Dixon & Gradwell (2016)

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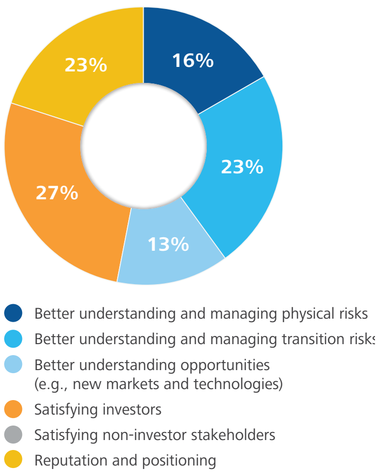
Findings and key insights

Current practices

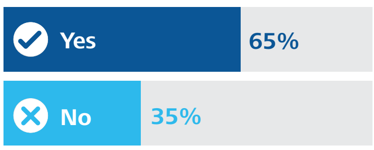
Nine out of ten of companies responding to South Pole's survey currently report against the Carbon Disclosure Project (CDP), eight out of ten against the Global Reporting Index (GRI) and four out of ten against ISO standards. Others report against International Integrated Reporting Council (IIRC), Sustainability Accounting Standards Board (SASB) and France's Article 173. The majority of respondents considered their financial and sustainability teams to be well or very well aligned for information sharing and reporting. Nine out of ten responding companies track Scopes I and II of Greenhouse gas (GHG) emissions, three quarters measure water consumption, two-thirds measure waste generation and a half measure GHG Scope III emissions. A third of respondents have set science-based targets for Scopes I and II, and fifteen percent have set targets for Scope III.

The governance of climate risks varies considerably between surveyed companies. Whilst some have a set process for risk management that connects directly to the board, others address climate risks across various teams, such as CSR units, without reporting to board level or aligning with strategic planning (see breakout box titled 'Risk management practices').

What benefits do you envisage from TCFD disclosure?



Do you believe there will be a first mover advantage in TCFD disclosure?



TCFD Drivers

It is encouraging that the majority of survey participants consider there to be a first mover advantage from early disclosure in line with the TCFD recommendations. One example given was shaping the style and content of TCFD responses to fit with the business systems and data outputs of first movers, with the prospect that early disclosures would become the template followed by other businesses in the future. Reputational benefits from disclosure were also recognised by a number of respondents. However, a concern regarding setting a precedent was also voiced in the survey, citing a preference for following industry standards rather than risking unwelcome scrutiny and the investment of time that early action may require.

Unsurprisingly, meeting the needs of investors was the most commonly stated advantage of TCFD compliance. Less than one in ten respondents are aware of being asked by investors for TCFD filings, indicating that a minority of investors are in alignment with TCFD. However, the impetus by businesses to learn more about transition and physical risks, as well as opportunities was common, hinting that the recommendations may achieve their intention of driving action through awareness. Interestingly, satisfying non-investor stakeholders was not considered to be a benefit by any respondents, suggesting that the TCFD recommendations would not meet their needs and that traditional disclosure channels (GRI, CDP etc.) would continue to be favoured.

Risk Management Practices

"Climate change and climate-related risks and opportunities are currently monitored on the Company's Emerging Risk Register"

"Climate risks are assessed based on financial, non-financial and operational implications and qualitatively on reputation, license to operate and compliance"

"Ultimately the Board have overall control, but at an operational level, the HSES function and businesses manage the climate risks and regularly report performance to the Executive"

All quotes from survey respondents

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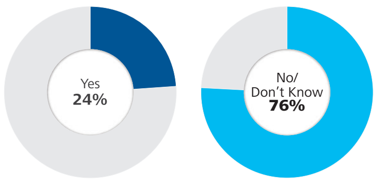
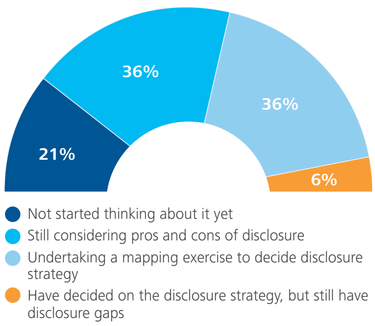
Have you created scenarios to assess the future risks of climate change or decarbonisation?



How far have you progressed on your TCFD journey?



Preparedness for TCFD

Seven out of ten of surveyed companies are still either considering the advantages and disadvantages of TCFD disclosure or undertaking a mapping exercise to decide on a suitable strategy. A quarter of companies have not yet started to think about disclosing based on the TCFD recommendations. Only six percent of companies have decided on a disclosure strategy (but still have certain gaps in the process). Only four in ten have defined the organisational boundaries for TCFD compliance.

However, nearly all responding businesses are already taking action in two or more of the four elements of TCFD. In particular, they are well prepared for the recommendations around governance, risk management,metrics and targets. They are less prepared for the strategy element of TCFD, the most stretching aspect of the recommendations, with under a quarter having created scenarios.

Behind these figures, however, the picture among surveyed companies is much more complex. A number of responding businesses indicated that although the necessary structures are in place to manage climate and carbon risks, these risks are often not given the attention they deserve. The main reasons given can be summarised as a lack of recognition of the risks' systemic implications on operations and supply chains, and of the magnitude of their exponential impact.

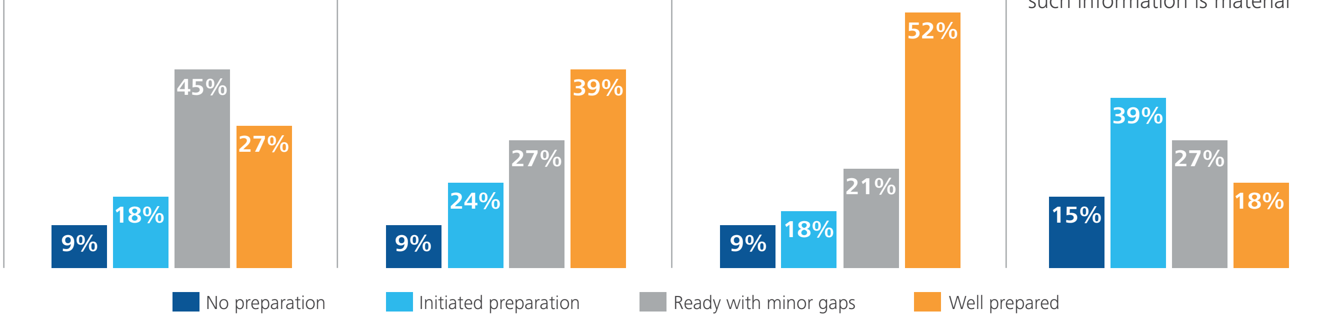
How prepared are you for the four areas of TCFD disclosures?

Risk Management:
"Disclose how the organisation identifies, assesses, and manages climate-related risks"

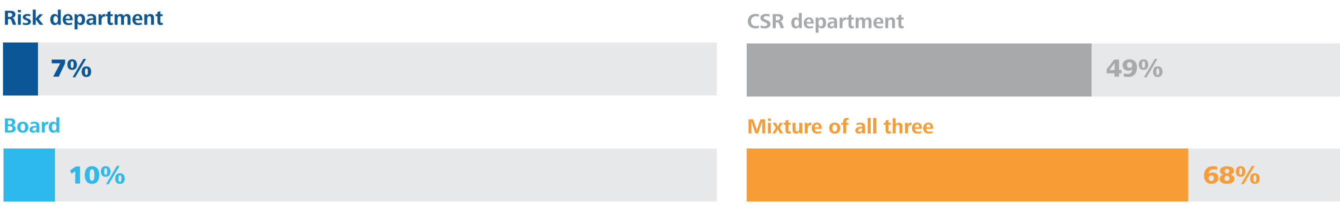
Metrics and Targets:
"Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material"

Governance:
"Disclose the organisation's governance around climate-related risks and opportunities"

Strategy:
"Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material"



Where does responsibility for TCFD sit within your organisation?



Multiple answers possible

Planned improvements by respondents

Governance and Risk Management
"Additional communication upwards to senior management"
"Align financial reporting and ESG risks reporting"
"Better assessment in the supply chain"
"Using longer risk horizons to account for the longer timeframes of climate change"
"Widened supplier evaluations"

Metrics and targets
"Scope III"
"Science based targets"

Strategy tools
"scenario analysis including 2° warming"
"WBCSD: The Cement CO_2 and Energy Protocol"
"tools related to water risk"
"multiple scenario analysis"

Planning for TCFD

Just over a third of survey participants are currently planning to report according to TCFD recommendations, with most respondents uncertain. Under two in ten are planning to report in 2018. Although the majority are not currently planning changes to their internal structures and processes in the context of TCFD, some businesses recognise the shortcomings and are planning to improve them (see breakout box titled 'Planned improvements by respondents').

With only a few months since the publication of the TCFD framework, understandably there are information and awareness gaps among businesses, with a large number of respondents uncertain whether and when to disclose. For many, the benefits of reporting are clear, but they are uncertain on the best way to move forward.

A number of survey participants are engaged in gap analysis or strategy development. The common areas for further improvement were the integration on risk management and further emphasis on climate and carbon risks, as well as the inclusion of better metrics and tools to help best navigate the TCFD disclosure recommendations.

Only a minority has decided on a TCFD-led disclosure strategy, although even this could be subject to change. One telling anecdote was given by the sustainability manager of a company within a wider group of logistics companies: whereas disclosure had initially been expected in 2018, once the sustainability managers from all the companies within the group had met to discuss TCFD and fully grasped its implications, the decision was made at group level to delay disclosure until 2020.

Conclusions and the way forward

The TCFD recommendations are a very important step towards mainstreaming disclosure of climate-related risks and opportunities in financial filings and enabling companies and investors to better manage and drive the transition to a low-carbon, resilient future.

Their emphasis on strategy, particularly scenario development, demonstrate a new paradigm of investor needs on climate change disclosure. It is not enough to simply state physical and transition risks - mitigation and adaptation plans are required to achieve emission reduction targets in the national and global contexts.

Whilst the investor needs for TCFD disclosures will give an important pull to corporates, the urgency to estimate and prepare for climate risk is increasingly recognized among the business community. Many corporations are using TCFD as a framework, which gives the flexibility to be interpreted at sector and company level, and establishing systems and practices which best suit their circumstances.

This includes:

- **Governance:** improving board oversight and communication from risk managers, operations and supply chains
- **Risk management:** ensuring CRR are given due prominence and their long term, systemic and unpredictable nature are better understood
- **Metrics and targets:** addressing Scope 3 emissions and setting science-based targets
- **Strategies:** developing multiple scenarios including a 2°C warming pathway

> *"Companies would disclose not only what they are emitting today, but how they plan their transition to the net-zero world of the future"*
>
> **Mark Carney**
> TCFD leader

> *"Disclosing information about the material financial risks that climate change creates is critical for the stability of our financial system. At Philips Lighting we recognize not only the risks that climate change creates, but also the wide economic opportunities that the low-carbon transition is creating"*
>
> **Harry Verhaar**
> Head of Global Public & Government Affairs, Philips Lighting

> *"Being an early bird can help influence how TCFD will be established. Reporting is not a status quo issue, it is developing all the time. By contributing we are helping to make the agenda more relevant."*
>
> **Kirsten Margrethe Hovi**
> Head of Extra-Financial Reporting, Norsk Hydro ASA

There are clear benefits to be gained from disclosing in line with the TCFD recommendations, as highlighted by external research on the topic. Firstly, listed companies that do not disclose physical CRR as part of annual reporting practices might be leaving key investors without sufficient information to assess risk in their portfolios and, in the worst case, exposing them to losses.[6] The results of the survey confirm that the most important benefit that surveyed companies expect to gain from disclosing CRR is satisfying the investor need to obtain information. Secondly, it has been proved that CSR disclosures are increasingly influencing asset managers on decisions whether or not to buy, sell or hold a securities.[7] Sustainability reports and ESG disclosures have become more common in the past decades and are considered as a vital part of investors' decision-making. Including CRR in financial disclosures is considered to be a smart move in light of the changing regulatory and physical climate. The survey showed that responding businesses are also expecting the discipline of responding to the strategy elements of TCFD to accelerate their understanding of physical and transition risks, and opportunities from the low-carbon transition. This will help them remain competitive and resilient in the face of warming impacts and the huge infrastructure and cultural shifts to a decarbonised world.

Ultimately, the Taskforce seeks to prompt increased climate consciousness and action among investees, and greater selectivity from investors for climate-derisked businesses. Its intent is to create a virtuous, sustainable cycle of positive change in climate-related financial risk disclosure practices. Overall, the findings of South Pole's survey seem to align with many of the global trends and observations in the realm of TCFD-led climate-risk disclosure. It also shows that, among responding corporates, the direction of travel is recognised, but the journey is just beginning.

Our Expertise

South Pole Group has a breadth of experience which is relevant to the varied needs of TCFD implementation:

- **risk management and governance:** corporate assessments and advisory on management practices, risk identification and mitigation;
- **metrics and targets:** GHG and environmental accounting of over 150 companies, projects and products worldwide;
- **supply chains:** measuring and reducing risks along the supply chain. Using AQUEDUCT and Big Chain Tool for detailed analysis;
- **scenario development:** warming, water shortage and flood projections mapped against operations and supply chain assets globally; anticipated carbon policy and pricing changes and their impacts on key product lines;
- **reporting:** CDP assessments, report writing and verification.

More than 200 companies have trusted our team to provide a complete service, supporting them to navigate the risks and opportunities of climate change and drive GHG reductions and mitigation. We work at multiple levels including strategic advisory to the C-suite, and operational change management with CSR, risk and technical departments. This includes the development of science-based targets and Task Force on Climate-Related Financial Disclosures (TCFD) filings.

To learn more about how our team of over 200 skilled and enthusiastic professionals can help you understand and disclose climate-related risk and develop a comprehensive climate change strategy, please contact Charles Henderson, c.henderson@southpole.com, +44 20 3770 0325

[6] Matsumura, Ella Mae and Prakash, Rachna and Vera-Munoz, Sandra C. (2017), McCann, D. (2016)
[7] The Sustainability Accounting Standards Board (SASB)

References

CDP (2017). *Putting a price on carbon: Integrating climate risk into business planning.* cdp.com. Available at: https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/738/original/Putting-a-price-on-carbon-CDP-Report-2017.pdf?1507739326

Chestney, N. (2016). *G20 task force wants companies to come clean on climate risk*. www.reuters.com. Available at: https://www.reuters.com/article/us-climatechange-financial-risks/g20-task-force-wants-companies-to-come-clean-on-climate-risk-idUSKBN1431BZ

Dietz, Bowen, Dixon & Gradwell (2016), *Climate value at risk of global financial assets*, Nature Climate Change

French Sustainable Investment Forum, FIR (2017), *Article 173-VI: Understanding the French regulation on investor climate reporting.*

Hardin, Garrett (1968), *The Tragedy of the Commons*. Science 162: 1243–1248.

Jones, Dave (2016), *California Insurance Commissioner Dave Jones calls for insurance industry divestment from coal,* California Department of Insurance (Press release)

Matsumura, Ella Mae and Prakash, Rachna and Vera-Munoz, Sandra C., (2017), *To Disclose or Not to Disclose Climate-Change Risk in Form 10-K: Does Materiality Lie in the Eyes of the Beholder?* Available at SSRN: https://ssrn.com/abstract=2983977

McCann, David (2016), *Battles brew over climate risk disclosure*. CFO.com. Available at: http://ww2.cfo.com/disclosure/2016/04/battles-brew-climate-risk-disclosure/.

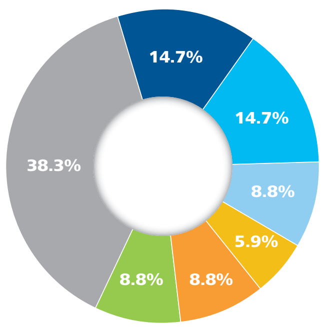
McGlade, Christophe and Etkins, Paul (2015), *The geographical distribution of fossil fuels unused when limiting global warming to 2 °C, Nature 517*, 187–190, doi:10.1038/nature14016
Moliterni, Fabio and Pareglio, Stefano (2017), Disclosing Climate-Related Risks: Current and Future Prospects. FEEM Policy Brief No. 03.2017. Available at SSRN: https://ssrn.com/abstract=3040582

OECD (2017), Investing in Climate, *Investing in Growth*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264273528-en

The Sustainability Accounting Standards Board (SASB): www.sasb.org

TCFD Webpage: www.fsb-tcfd.org

Appendix I



Survey Method

In November 2017, just ahead of the COP23 conference in Bonn, South Pole undertook a small survey to better understand the current state of play within the corporate sector on TCFD drivers, preparedness and plans for implementation.

The method and respondents

Responses[8] to 23 questions were received from a range of businesses across a number of different sectors. Question types included multiple choice, scoring and open ended formats. Additionally, selected respondents were contacted for a follow-up discussion on the results of the survey, as a means to gather first-hand comments and additional insights. Many respondents preferred to remain anonymous hence their comments are not attributed.

[8] Respondent sample: 34 businesses