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The large-scale and complex nature of climate change makes it uniquely challenging, especially in the context of economic decision making. Further, many companies have incorrectly viewed the implications of climate change to be relevant only in the long term and, therefore, not necessarily relevant to decisions made today. Those views, however, are changing as more information becomes available on the potential widespread financial impacts of climate change.

In December 2019, Bank of England Governor Mark Carney noted that “changes in climate policies, new technologies and growing physical risks will prompt reassessments of the values of virtually every financial asset.” Companies and providers of capital, therefore, should consider their longer-term strategies and most efficient allocation of capital in light of these changes. Organizations that invest in activities that may not be viable in the longer term will likely be less resilient to the transition to a lower-carbon economy — and their investors will likely experience lower returns.

Compounding the effect on longer-term returns is the risk that present valuations do not adequately factor in climate-related risks because of insufficient information. Investors, lenders, and insurance underwriters need adequate information on how companies are preparing for a lower-carbon economy. More effective, clear, and consistent climate-related disclosure is needed from companies around the world.

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The Need for Climate-Related Financial Disclosure

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Natural catastrophe losses intensified by climate change (2017-2019)¹

Value at risk as a result of climate change to manageable assets by 2100²

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“Now is the time to ensure that every financial decision takes climate change into account.”

– Mark Carney, UN Special Envoy on Climate Action and Finance, Governor of the Bank of England, December 2019
Potential Financial Implications of Climate Change

Rise in Natural Catastrophes and Chronic Environmental Shifts

- Macroeconomic shocks or financial losses caused by storms, droughts, wildfires, and other extreme events, or by changing weather patterns over time
- Unanticipated financial losses resulting from climate change (e.g., the effect of rising sea level on credit secured by coastal real estate) could impact the global financial system

Transition to a Low-Carbon Economy

- Risks associated with an abrupt adjustment to a low-carbon economy, such as rapid losses in the value of assets due to changing policy or consumer preferences
- Climate-related financial risks could affect the economy through elevated credit spreads, greater precautionary saving, and rapid pricing readjustments
Climate Change is a Financial Risk

Climate-related risk is non-diversifiable and will have a financial impact on many companies:

“Climate-related risks are a source of financial risk and it therefore falls squarely within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks.”

– Network for Greening the Financial System, First Comprehensive Report, April 2019
G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board (FSB) to review how the financial sector can take account of climate-related issues.

The FSB established the Task Force on Climate-related Financial Disclosures (TCFD) to develop recommendations for more effective climate-related disclosures that:

- could “promote more informed investment, credit, and insurance underwriting decisions”

- in turn, “would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system’s exposures to climate-related risks.”
Industry Led and Geographically Diverse Task Force

The Task Force’s 32 international members, led by Michael Bloomberg, include providers of capital, insurers, large non-financial companies, accounting and consulting firms, and credit rating agencies.

17 Experts from the Financial Sector

7 Experts from Non-Financial Sectors

8 Other Experts
Demand for climate-related disclosure has increased significantly since the release of the TCFD recommendations in 2017.

Many private sector financial institutions, investors, and others continue to make progress on incorporating climate-related disclosure into their financial decision-making. For example, over 370 investors with more than $35 trillion in assets under management committed to engage with the world’s largest corporate greenhouse gas emitters to strengthen their climate-related disclosures by implementing the TCFD recommendations as part of Climate Action 100+.

Demand for climate-related disclosure from investors and others is critically important. In particular, large asset owners and asset managers sit at the top of the investment chain and, therefore, have an important role to play in influencing the organizations in which they invest to provide better climate-related financial disclosures.

“It is necessary for all parties in our investment chain, from portfolio companies to asset managers, to support TCFD so that asset owners like us can properly access our portfolio. I am convinced that TCFD will continue to evolve as a major framework for such disclosure and strongly recommend all corporates to join.”

– Hiro Mizuno, Executive Managing Director and CIO
Japan Government Pension and Investment Fund, February 2020
In addition, **public sector** leaders have also noted the importance of transparency on climate-related issues within financial markets. Climate-related risk is increasingly the subject of new reporting requirements, such as the European Non-financial Reporting Directive 2014/95/EU, stress testing, and regulatory guidance based on the TCFD recommendations. Several national governments and public sector organizations formally support the TCFD.

“The NGFS emphasises the importance of a robust and internationally consistent climate and environmental disclosure framework. NGFS members collectively pledge their support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The NGFS encourages all companies issuing public debt or equity as well as financial sector institutions to disclose in line with the TCFD recommendations.”

– Network for Greening the Financial System First Comprehensive Report April 2019
Climate-Related Risks and Opportunities

The Task Force identified several categories of climate-related risks and opportunities. These include potential financial impact to assist investors, and companies consider longer-term strategies and most efficient allocation of capital in light of the potential economic impacts of climate change.

### Risks

**Transition**
- Policy and Legal
  - Carbon pricing and reporting obligations
  - Mandates on and regulation of existing products and services
  - Exposure to litigation
- Technology
  - Substitution of existing products and services with lower emissions options
  - Unsuccessful investment in new technologies
- Market
  - Changing customer behavior
  - Uncertainty in market signals
  - Increase cost of raw materials
- Reputation
  - Shift in consumer preferences
  - Increased stakeholder concern/negative feedback
  - Stigmatization of sector
- Physical
  - Acute: Extreme weather events
  - Chronic: Changing weather patterns and rising mean temperature and sea levels

### Opportunities

**Resource Efficiency**
- Use of more efficient modes of transport and production and distribution processes
- Use of recycling
- Move to more efficient buildings
- Reduced water usage and consumption

**Energy Source**
- Use of lower-emission sources of energy
- Use of supportive policy incentives
- Use of new technologies
- Participation in carbon market

**Product & Services**
- Development and/or expansion of low emission goods and services
- Development of climate adaption and insurance risk solutions
- Development of new products or services through R&D and innovation

**Markets**
- Access to new markets
- Use of public-sector incentives
- Access to new assets and locations needing insurance coverage

**Resilience**
- Participation in renewable energy programs and adoption of energy-efficiency measures
- Resource substitutes/diversification

“Climate change presents global markets with risks and opportunities that cannot be ignored, which is why a framework around climate-related disclosures is so important. The Task Force brings that framework to the table, helping investors evaluate the potential risks and rewards of a transition to a lower carbon economy.”

– TCFD Chair, Michael R. Bloomberg, June 2017
The TCFD Recommendations

The TCFD’s recommendations were published in its 2017 report, in addition to supporting materials to assist with implementing climate-related financial disclosure.

This report provides context, background, and the general framework for climate-related financial disclosures—it is intended for broad audiences.

The annex provides the next level of detail to help companies implement the recommendations.

The technical supplement is a further level of detail that can be helpful for companies in considering scenario analysis.

The TCFD 2017 report, supporting materials, and recent status reports are available at fsb-tcfd.org/publications/.
In its work, the Task Force drew on member expertise, significant stakeholder engagement, and existing climate-related disclosure regimes to develop a singular, accessible framework for climate-related financial disclosure. The recommendations are structured around four thematic areas that represent core elements of how organizations operate:

- Governance
- Strategy
- Risk Management
- Metrics and Targets

“The work of the TCFD shows the power of voluntary engagement from the private sector and how it can complement public sector regulations. A remarkable endeavor, the TCFD has developed global standards that are now being used by a significant number of corporations around the world”

– Christian Thimann, TCFD Vice Chair and CEO and Chairman of the Management Board, Athora Germany, February 2020
The four recommendations are supported by specific disclosures organizations should include in financial filings or other reports to provide decision-useful information to investors and others.

**Key Features of Recommendations**

- **Adoptable by all organizations**
- **Designed to solicit decision-useful, forward-looking information on financial impacts**
- **Strong focus on risks and opportunities related to transition to lower-carbon economy**
- **Disclosure under the strategy and metrics and targets recommendations in financial filings is subject to a materiality assessment, although all organizations are encouraged to disclose publicly if practicable**
### Governance

Disclose the organization’s governance around climate-related risks and opportunities.

**Recommended Disclosures**

a) Describe the board’s oversight of climate-related risks and opportunities.

b) Describe management’s role in assessing and managing climate-related risks and opportunities.

### Risk Management

Disclose how the organization identifies, assesses, and manages climate-related risks.

**Recommended Disclosures**

a) Describe the organization’s processes for identifying and assessing climate-related risks.

b) Describe the organization’s processes for managing climate-related risks.

c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.

### Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy and financial planning where such information is material.

**Recommended Disclosures**

a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

b) Describe the impact of climate-related risks and opportunities on the organization’s business, strategy, and financial planning.

c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

### Metrics and Targets

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

**Recommended Disclosures**

a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.
“We see extensive and mounting evidence that the physical and transition effects of the climate crisis are real. In order to reach the goals of the Paris Agreement we need to take forceful action – this includes action from corporations and the private sector at large, Climate-related disclosures and the TCFD recommendations help companies consider the impact of climate change and associated mitigation efforts on their strategies and operations. A company that communicates its climate resiliency to its investors will have a competitive advantage over those that don’t.”

– Mary Schapiro, Special Advisor to the TCFD Chair and Vice Chair for Global Public Policy at Bloomberg LP, June 2019
Guidance on Implementing the TCFD Recommendations

In 2017, the Task Force developed an annex report that provides both general and sector-specific guidance to assist organizations with implementing the TCFD recommendations and recommended disclosures.

Example of Guidance for All Sectors

Investors and other stakeholders need to understand how climate-related issues may affect an organization’s businesses, strategy and financial planning over the short, medium, and long term. Such information is used to inform expectations about the future performance of an organization.

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning, where such information is material.

Recommended Disclosure a)

Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

Guidance for All Sectors

Organizations should provide the following information:

- a description of what they consider to be the relevant short-, medium-, and long-term time horizons, taking into consideration the useful life of the organization’s assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms,

- a description of the specific climate-related issues potentially arising in each time horizon (short, medium and long term) that could have a material financial impact on the organization, and

- a description of the process(es) used to determine which risks and opportunities could have a material financial impact on the organization.

Organizations should consider providing a description of their risks and opportunities by sector and/or geography, as appropriate. In describing climate-related issues, organizations should refer to Tables A1 and A2 on pages 72-73 of the 2017 TCFD Final Report.
Recommended Disclosure b)
Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

Guidance for All Sectors
Building on recommended disclosure (a), organizations should discuss how identified climate-related issues have affected their businesses, strategy and financial planning. Organizations should consider the impact on their businesses and strategy in the following areas:

- Products and services
- Supply chain and/or value chain
- Adaptation and mitigation activities
- Investment in research and development
- Operations (including types of operations and locations of facilities)

Organizations should describe how climate-related issues serve as an input to their financial planning process, the time period(s) used, and how these risks and opportunities are prioritized. Organizations' disclosures should reflect a holistic picture of the interdependencies among factors that affect their ability to create value over time. Organizations should also consider including in their disclosures the impact on financial planning in the following areas:

- Operating costs and revenues
- Capital expenditures and capital allocation
- Acquisitions or divestments
- Access to capital

If climate-related scenarios were used to inform the organization's strategy and financial planning, such scenarios should be described.

Which Organizations Should Implement the TCFD Recommendations?

To promote more informed investing, lending, and insurance underwriting decisions, the Task Force recommends all organizations with public debt or equity implement its recommendations. Because climate-related issues are relevant for other types of organizations as well, all organizations are encouraged to implement these recommendations.

In particular, implementation by asset managers and asset owners, including public- and private-sector pension plans, endowments, and foundations will help their clients and beneficiaries better understand the performance of their assets, consider the risks of their investments, and make more informed investment choices.
Sector-Specific Supplemental Guidance

In addition to the guidance for organizations in all sectors, supplemental guidance is available for the following groups and industries:

**Financial Sector Industries**
- Banks
- Insurance Companies
- Asset Managers
- Asset Owners

The financial sector was organized into four major industries largely based on activities performed. The activities are lending (banks), underwriting (insurance companies), asset management (asset managers), and investing (asset owners).

**Non-Financial Groups**
- Energy
- Transportation
- Materials & Buildings
- Agriculture, Food, and Forest Products

The non-financial groups identified by the Task force account for the largest proportion of GHG emissions, energy usage and water usage.

“It is encouraging to see the increasing number of banks that are systematically including TCFD recommendations in their risk and opportunities analysis.”

– Denise Pavarina, Senior Advisor, Aggrego Consultores, February 2020
Implementing the TCFD Recommendations

Organizations are now able to draw upon a wealth of examples and resources to accelerate their disclosures aligned with the TCFD recommendations. Once initial climate-related reporting is released, companies are encouraged to continue improving and developing their disclosures. Implementing the TCFD recommendations generally includes the following considerations:

Managing Climate-Related Issues
Building appropriate internal processes to manage climate-related issues, as well as collecting necessary data and metrics.

Existing and Future Reporting Requirements
Reviewing requirements for financial and non-financial reporting considering whether additional requirements will likely be released.

Reporting Capabilities
Developing processes and capacity to report information under the TCFD recommendations – subject to appropriate internal governance processes and in line with regulatory requirements.

Materiality
Taking the unique longer-term impacts and challenges of climate change into account when assessing materiality. All organizations are encouraged to report in line with the Governance and Risk Management recommendations regardless of materiality.

Placement
Determining the appropriate placement of disclosures – in mainstream (i.e., public) annual financial filings as recommended by the TCFD or other official company reports.

Ongoing Collaboration and Improvement
Organizations have expressed that participation in TCFD working groups, workshops or even knowledge sharing with peers and investors has been helpful in advancing climate-related disclosure.
Illustrative Implementation Path

Five Year Time Frame

Adoption Volume

- Final TCFD Report released
- Companies already reporting under other frameworks implement the Task Force’s recommendations. Others consider climate-related issues within their businesses.
- Organizations begin to disclose in financial filings.
- Greater adoption, further development of information provided (e.g., metrics and scenario analysis), and greater maturity in using information.
- Broad understanding of the concentration of carbon-related assets in the financial system and the financial system’s exposure to climate-related risks.
- Climate-related issues viewed as mainstream business and investment considerations by both users and preparers.
- More complete, consistent, and comparable information for market participants, increased transparency, and appropriate pricing of climate-related risks and opportunities.

TCFD Principals for Effective Disclosures

1. Disclosures should represent relevant information
2. Disclosures should be specific and complete
3. Disclosures should be clear, balanced and understandable
4. Disclosures should be clear over time
5. Disclosures should be comparable among companies within a sector, industry or portfolio
6. Disclosures should reliable, verifiable and objective
7. Disclosures should be provided on a timely basis
Benefits of Implementation

Some of the potential benefits associated with implementing the Task Force’s recommendations include:

- Easier or better access to capital by increasing investors’ and lenders’ confidence that the company’s climate-related risks are appropriately assessed and managed
- More effectively meeting existing disclosure requirements to report material information in financial filings
- Increased awareness and understanding of climate-related risks and opportunities within the company, resulting in better risk management and more informed strategic planning
- Proactively addressing investors’ demand for climate-related information in a framework that investors are increasingly asking for, which could ultimately reduce the number of climate-related information requests received

“The TCFD disclosure requirements have really helped us drive better quality thinking around the impact that climate change could have on our business as well as our impact on climate change, it has also caused us to bring together our technical specialists, our operators and our finance teams to brainstorm these issues which has strengthened the rigour of our thinking, our understanding of the implications but most importantly the identification of key actions.”

- Graeme Pitkethly, Chief Financial Officer, Unilever, February 2020
A Note on Climate-Related Resilience and Scenario Analysis:
The TCFD recommends organizations disclose information about the resilience of their strategies based on the outcomes of different climate-related scenarios—where such information is material. The TCFD believes climate-related scenario analysis is an important and useful tool for organizations to use to understand the strategic implications of climate-related risks and opportunities, regardless of materiality. In particular, climate-related scenario analysis can help organizations identify indicators to monitor the external environment, which may provide early warning to reassess and adjust strategies.
Select Resources on the TCFD Recommendations
TCFD Website
Further information on TCFD is available on our website at fsb-tcfd.org. The TCFD website includes all of the TCFD’s publications, including the final recommendations, implementation annex, guide to scenario analysis, report translations, and recent status reports.

TCFD Knowledge Hub
The TCFD Knowledge Hub (TCFDhub.org) hosts over 400 resources that help companies identify, analyze, and report climate-related financial information. The Hub was created by the Climate Disclosure Standards Board (CDSB) to support the adoption of the TCFD recommendations and the development of high-quality, consistent and comparable climate-related financial disclosures.

WBCSD Preparer Forums
The World Business Council for Sustainable Development (WBCSD) has worked with companies in several industries, such as oil and gas, electric utilities, and chemicals, in forums focused on implementation of the TCFD recommendations. The reports of these “preparer forums” are available on the WBCSD website.

UNEP FI Reports on Climate-Related Risk and Scenario Analysis
The United Nations Environment Programme Finance Initiative (UNEP FI) has led pilot projects on TCFD implementation for financial institutions. Its 16-member banking pilot released two reports in 2018 that detail climate-related scenario analysis methodologies for banks. UNEP FI led a 20-member pilot for investors, which released a guide to scenario-based methods for climate risk assessment in 2019, as well as a similar effort with 16 major insurers. All reports are available at unepfi.org/tcfd.

Additional Resources
Many other organizations such as the UN Principles for Responsible Investing (UN PRI), CDP, CDSB, and the Sustainable Accounting Standards Board (SASB) have worked to align with the TCFD recommendations and have released various resources to assist organizations with implementing and using climate-related financial disclosure.
TCFD Supporters

Since the release of the TCFD recommendations, support for the TCFD has increased rapidly. The TCFD’s 1,030 supporting organizations span the public and private sectors and represent over 80 industries in 50 countries, including seven national governments.

How you can support TCFD:
Visit fsb-tcfd.org/supporting-tcfd-recommendations/ and submit the form to contact the TCFD or become a supporter.
“Four years on, the TCFD has generated a step change in both the demand for and supply of climate reporting. The demand for TCFD disclosure is now enormous.”

– Mark Carney, UN Special Envoy on Climate Action and Finance, Governor of the Bank of England, September 2019

1,068 supporters as of February 2020 have a market capitalization of over $12 trillion, including over 480 financial firms, responsible for assets of $138 trillion.
“Important progress is being made. Our review of over 1,000 companies showed that, for some recommended disclosures, the percentage of companies disclosing information increased round 30% over a two-year period. The results of our survey indicate that many companies are putting significant thought and effort into implementing the recommendations, and that many investors have seen this work pay off in the form of increases in the availability and quality of disclosure.

However, progress must be accelerated. Today’s disclosures remain far from the scale the markets need to channel investment to sustainable and resilient solutions, opportunities, and business models.”

– TCFD Chair, Michael R. Bloomberg, June 2019
Progress

Based on an Artificial Intelligence review of reports of over 1,100 companies, disclosures of climate-related financial information is growing, but not fast enough.

Number of recommended disclosures addressed

<table>
<thead>
<tr>
<th>Year</th>
<th>Disclosures Addressed Per Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2.8</td>
</tr>
<tr>
<td>2017</td>
<td>3.1</td>
</tr>
<tr>
<td>2018</td>
<td>3.6</td>
</tr>
<tr>
<td>Goal</td>
<td>5</td>
</tr>
<tr>
<td>Goal</td>
<td>11</td>
</tr>
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Responses

The TCFD Survey received 485 responses, including 198 companies preparing disclosures.

Preparers identified several challenges in implementing TCFD:

- Climate is embedded in processes and is challenging to discuss separately in disclosures: 49%
- Disclosing assumptions is difficult because they include confidential business information: 46%
- There is a lack of standardized metrics for our industry: 42%

Top survey issues for Preparers

Have decided to “fully” or “partially” implement the recommendations

- No material climate risk: 91%
- Material climate risk: 67%
- Climate is embedded in processes and is challenging to discuss separately in disclosures: 60%

Top survey issues for Users and Other Respondents

Cited an increase in the availability of climate-related financial disclosures

- Use climate-related financial disclosures in decision-making processes: 85%
- Cited improvements in the quality of disclosures: 76%
- Consider climate-related issues to be material today or in next 1-2 years: 75%
Examples of Public Sector Developments

Australia
The Australian Securities and Investment Commission (ASIC) published updates to its existing regulatory guidance on the disclosure of climate-related risks and opportunities, including incorporation of the TCFD risk categories and recommendations.

Canada
Canada’s Ministry of Finance has encouraged investors to incorporate the TCFD recommendations to help direct capital flows towards sustainable businesses, and announced that the government would encourage adoption of the TCFD recommendations by state-owned entities.

Chile

European Union
In June 2019, the European Commission published new guidelines incorporating the TCFD recommendations into the Non-Financial Reporting Directive 2014/95/EU, as part of the Commission’s Sustainable Finance Action Plan.

France
The French Government is a leader on climate-related disclosure through its Article 173 mandatory climate-related reporting by investors, as well as an early supporter of the TCFD.

Japan
The support and efforts of the Ministry of Economy, Trade, and Industry (METI), Ministry of Environment (MoE), and Financial Services Agency (JFSA) have led to significant industry support: Japan represents the largest number of the TCFD’s supporters at more than 200 companies.
Malaysia
In December 2019, the Central Bank of Malaysia published a discussion paper, “Climate Change and Principle-based Taxonomy,” which proposes that supervised institutions should promote voluntary disclosure in line with the TCFD recommendations.

New Zealand
In November 2019, New Zealand released a discussion document on climate-related financial disclosure, including a proposal that captured entities will be required to implement TCFD recommendations on a comply or explain basis.

United Kingdom
The UK Government, the Financial Conduct Authority, and Bank of England Prudential Regulatory Authority have led on support for the TCFD, climate-related stress testing, and incorporating the TCFD into regulatory guidance.

Global Commission on Adaptation
The Global Commission on Adaptation led by a group of 20 countries to accelerate climate adaptation, released a report calling the world’s largest developed economies to align disclosure practices with TCFD.

Network for Greening the Financial System (NGFS)
The NGFS, a group of 48 central banks and supervisors and nine observers, has encouraged financial sector institutions and companies to disclose in line with the TCFD recommendations.