Advancing Meaningful Climate Action Through TCFD Disclosures

A brief study by WSP
The COVID-19 pandemic continues to threaten the health and well-being of individuals across the globe, with associated economic impacts requiring businesses to re-engineer their business models and threatening the viability of many companies. Right now, the business and investment community is trying to weather this pandemic, as many consider it an immediate and acute shock to our system and a “black swan” event. The global pandemic is not a black swan event. Experts have been planning for this type of pandemic and other emerging threats for several decades; we just didn’t know when it would affect us worldwide, and not everyone had the strategic foresight and economic wherewithal to proactively prepare for this type of event.

Meanwhile, climate change continues to intensify and impact business through intense heatwaves, forest fires, storms, and flooding. This ongoing, systemic, and chronic crisis is something we have been tracking for decades and may have even greater long-term implications than what we are experiencing from this global pandemic. Strategically preparing for these emerging trends and the cascading impacts requires us to act now.

Investors, insurers, and underwriters are working hard to minimize losses from COVID-19 while managing the risks from climate change. We have seen that companies that take a proactive approach in managing environmental, social, and governance (ESG) issues have had greater resilience to the impacts resulting from the COVID-19 crisis. Similarly, we expect that companies that take early action to minimize climate-related risks and maximize climate-related opportunities will outperform those that have yet to assess and manage climate change and the various impacts on their business, strategy, and financial planning.

We conducted this study to help investors and other stakeholders better understand the climate-readiness of investee companies by leveraging their climate disclosures. Companies can use the findings in this report to understand how to better communicate with their stakeholders the important actions they are taking to align with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, transition to a more sustainable future, and enhance their overall resilience.

At WSP, we have a global team of experts specialized in climate change risk, resilience, and external ESG-related disclosures who work across sectors and regions. We help our clients assess, manage, and mitigate climate risks and opportunities, and develop and improve their disclosures. Please reach out to one of our experts if you would like to discuss the study or how we can help you preserve value in light of a changing climate.

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Executive Summary

Climate change is impacting businesses now and will only intensify into the future. At the same time, the transition to a low carbon economy is presenting new market opportunities. Investors, insurers, and other business stakeholders need a robust understanding of how these risks and opportunities will affect companies across their operations and/or portfolios, and the efforts of impacted companies and/or investees in responding and managing climate change impacts.

In 2017, the Task Force on Climate-related Financial Disclosures (TCFD) developed recommendations for climate-related financial disclosures applicable across sectors and geographies. Since the release, there has been a steady up-take of the TCFD requirements and the more recent years seeing the greatest increase. However, despite the increasing trend in disclosures by companies, investors and other stakeholders have found the disclosures to be limiting. Disclosures are frequently inconsistent and lack needed detail, making comparisons between companies and sectors difficult. To date, most TCFD disclosures are in standalone reports and climate change has not been included in mainstream financial filings.

“The results of this study help shed light on how companies and industries are progressing in their alignment with the TCFD recommendations. As a leader in climate action, we are actively exploring ways to enhance our sustainability and climate resilience practices, processes, and on-the-ground action. The analysis conducted through this study and the maturity roadmap discovered here gives us guidance on how to advance these actions and further align with the TCFD recommendations.

FORTUNE 50 COMPANY
WSP conducted a study of 50 TCFD disclosures cutting across multiple sectors and geographies, to assess the usability of disclosures by investors. We applied our proprietary TCFD Benchmarking Tool to score the quality of the disclosures. The aim of the study was to determine whether the climate-related disclosures could be used to indicate the level of maturity of a company in its response to climate change, and the level of action it is taking in response. Five key findings were identified:

**THERE ARE SECTORS AND GEOGRAPHIC REGIONS WHERE DISCLOSURE IS LACKING:**

The financial services and IT sectors were scored as the most advanced, whereas the renewables and service sectors scored the lowest (see Section 4 for the definition of sectors). Geographically, North America and Europe are leading, whereas the Asian region is lagging.

**SECTORAL AND REGIONAL GAPS CAN BE TIED TO AN ABSENCE OF STRONG GOVERNANCE AND STRATEGIC FOCUS:**

Most disclosures contained basic information on the organization's understanding of climate change risks, with little or high-level details of responsibilities for climate change management. In many cases, absence of formal governance structures or a defined climate strategy were perceived as barriers to more mature activities such as scenario analysis, metrics and targets, or integration into risk management activities.
FOUR PHASES OF MATURITY COULD BE IDENTIFIED WITHIN THE DISCLOSURES:

Based on the indicators within our TCFD Benchmarking Tool, we could allocate companies to one of four Phases of Maturity on climate disclosures. The phases are, in order of increasing maturity:

1. Understanding and addressing climate change;
2. Building capacity;
3. Mainstreaming;
4. Transforming sustainability and resilience.

The phases present a framework for investors to use TCFD disclosures as a tool for understanding whether a company is managing climate-related risks and opportunities. The Phases are described in greater detail in Table 3.3: TCFD Maturity Roadmap.

MOST COMPANIES WHO ARE DISCLOSING ARE AT THE LOWER LEVEL OF MATURITY:

Some companies are only just now understanding what climate change means to their business, while there are a select few taking concrete actions and truly enhancing their business to manage risks and opportunities related to climate change. However, we recognize that what is disclosed may not always be the full, “behind the scenes” story.

THROUGH THE PHASES OF MATURITY DEVELOPED WITHIN OUR BENCHMARKING TOOL, WE ARTICULATE A SET OF NARRATIVES COMPANIES CAN USE TO HELP UNDERSTAND HOW TO PROGRESS TO THE NEXT PHASES:

Leveraging WSP’s phased maturity approach, companies can review their existing governance structure(s), strategies, enterprise risk management (ERM) and enterprise business continuity planning, and metrics and targets to assess how to advance to the next phase.

We further believe that the Phases of Maturity identified within this paper will serve as a tool to complement investors and other stakeholders as they assess the climate-readiness of investee companies using climate disclosures.
Introduction

THE NEED FOR CLIMATE-RELATED DISCLOSURES

The physical and transitional risks and opportunities related to climate change are already impacting companies, governments, and investors globally. With the ongoing global pandemic further straining individuals and companies around the world, a new focus on environmental, social, and governance (ESG) has emerged. We are seeing companies that are taking actions and reporting on sustainability to be faring more effectively and efficiently during the pandemic than those that have yet to invest in ESG-related activities. Major financial institutions such as BlackRock1, State Street, and HSBC2 have stated that assets that have greater ESG risk management have performed better during the pandemic.

The business and investment community agree: climate change has already impacted the global economy and will continue to have a profound effect on economies and financial markets in terms of risks and opportunities4. Many studies have suggested that the impact to the financial system will be in the order of trillions, perhaps tens of trillions of dollars, between now and the end of the century5. Institutional investors, who have a fiduciary duty to their clients to maximize risk-adjusted returns, need to understand the primary source for climate risk in their portfolio and how to mitigate or manage that risk. At the same time, the transition to a low-carbon economy presents market opportunities in sectors such as renewable energy and clean-tech, and investors want to be positioned to take advantage of those opportunities.

3. https://www.wemeanbusinesscoalition.org/about/
5. Bank of International Settlements, 2020
Investors, underwriters, and insurers utilize disclosure (among other inputs) to understand risks and opportunities within their portfolios. At the same time, companies use disclosure to indicate to investors (and other stakeholders) that they are optimizing their business and making prudent risk management decisions.

There is a known gap in substance with regards to sustainability disclosures, including climate-related disclosures. Companies are too often disclosing their business-as-usual activities, and are not disclosing the impact of climate change on their business models. Companies need to disclose the true sustainability of a company’s strategy, business model, and management measures to enable stakeholders to assess the impact, and how a business is managing such impacts.

The TCFD was formed in 2015 to address the global gap in reporting associated with the transition to a low-carbon, sustainable, and resilient economy. Created by the G20’s Financial Stability Board, it is comprised of financial institutions, preparers of disclosures, and other industry players. Their final disclosure recommendations were released in June 2017, with a primary focus on the impact on financial statements and the balance sheet (see Figure 1.1). The recommendations provide a framework for disclosing climate-related risks and opportunities, going beyond current practices in two significant ways: (1) inclusion in mainstream financial filings; and (2) using scenario analysis to inform business strategy.

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6. EPA Center for Corporate Climate Leadership, April 2020 [Link]
7. The Final Recommendations of the Task Force on Climate-related Financial Disclosures [Link]
While the recommendations are currently voluntary in most jurisdictions, they are designed to drive consistent, forward-looking, meaningful, and decision-useful disclosures to help investors, companies, insurers and underwriters make informed capital allocation decisions over the short-, medium-, and long-term.

Since their introduction in 2017, support for the TCFD has grown quickly. As of February 2020, 1,027 organizations have committed to support TCFD. Approximately 340 investors with nearly $34 trillion in assets under management are asking companies to report under TCFD. Major institutional investors, such as BlackRock and State Street, have signalled they expect investees to disclose in alignment with the TCFD recommendations and consider the risks and opportunities of climate change in their strategic and financial planning.

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8. TCFD Status Report, June 2019
9. BlackRock Investment Stewardship’s approach to engagement on the TCFD and the SASB aligned reporting, January 2020
ARE CURRENT DISCLOSURES DECISION-USEFUL?

While TCFD reporting is gaining increased support, the usefulness of that reporting is not yet clear. TCFD reporting to date does not provide clear information on whether organizations are adequately addressing climate risk and opportunities and does not indicate whether their business or financial strategies are resilient to the impacts of climate change.

Resilience to climate change is considered one of the more challenging TCFD recommendations to address and demonstrate. The TCFD suggests preparers conduct scenario analysis and provide insights on the resilience of business strategy and planning activities with regards to climate change, particularly a 2-degree, warming scenarios. Many organizations are beginning to work through scenario analysis, and there are multiple collaborative efforts to establish leading practices. However, the information disclosed to date on scenario analysis does not yet directly address the core question of whether or how a company’s strategy will fare under various warming scenarios.

Despite these barriers, the key actions a company can take to increase its climate-readiness is becoming clearer. Companies are developing governance and risk management committees, strategic plans to manage climate-related risks and opportunities, and there are various sector-led initiatives where sector-relevant metrics and targets to track progress on risks and opportunities across a variety of time horizons have been developed and piloted. All these activities will provide the support and therefore focus by companies in preparing climate risk responses. However, the question remains: how can an investor use public reporting as an input to help determine whether an organization is adequately addressing climate risk and maximizing climate opportunities?

When using current reporting, a meaningful assessment of a company’s management of climate related risks and opportunities is not possible (for most organizations). This may change in the future as disclosures evolve and mature, particularly if governments across the world begin requiring TCFD disclosures. For now, investors and other stakeholders must rely on qualitative details provided companies in their TCFD reporting, to understand whether climate-related risks and opportunities are adequate — relying heavily on subjective judgement.
WHAT DO WE MEAN BY MATURITY?

How does an investor assess a company’s maturity in managing climate change impacts in a consistent fashion across sectors, industries, geographies, and time horizons?

Organizational maturity speaks to the company’s understanding of its risks and opportunities, the processes it has put in place to address them, and how it is measuring and tracking the impacts. More mature companies will have well defined, measurable activities and processes to identify, manage and disclose risks and opportunities.

The TCFD has four pillars: governance, strategy, risk management, and metrics and targets. A company can be advanced on one TCFD pillar but not the others. For example, a company can have a robust understanding of its climate risks; however, it may lack governance structures to oversee the assessment and management of these risks adequately. Can an investor use TCFD disclosures to explicitly assign an overall climate maturity to a company, or engage a company on how to improve its climate maturity?

We believe that some information exists within TCFD reports to do just this. While a full assessment of maturity is not possible as alluded to above, we believe that information within disclosures provides direction. We have used our proprietary TCFD Benchmarking Tool to conduct a study of 50 large market cap companies (across sectors and geographies) in relation to their climate-related disclosures. We find that there is a clear distinction between companies within the study, and the distinction is related to maturity.
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Study Approach

WSP’S BENCHMARKING TOOL

The study was conducted using WSP’s proprietary TCFD Benchmarking Tool. The tool was developed considering the input of numerous direct client assessments, across multiple sectors, and various regions around the world. It has been deployed in our client work in multiple jurisdictions, and has been refined to reflect the maturity of our client’s climate actions progress, the continued evolution of TCFD reporting, and increased ESG-related accountabilities by investors.

The Benchmarking Tool is comprised of over 70 qualitative indicators, with multiple indicators assigned to each of the four TCFD core elements and 11 disclosure recommendations. We review company disclosures, including TCFD or climate change reports, sustainability reports, ESG reports, annual reports, financial filings, CDP disclosures, or other disclosure vehicles to identify material that may directly address the TCFD indicators. Indicators are chosen based on our subjective judgement and experience working on TCFD disclosures and cover the direct requirements of the TCFD and additional indicators that provide insights into a company’s activities to enhance its climate risk and opportunities. Table 2.1 below highlights some example indicators included in our tool to date. The list does not contain all 70+ indicators, as our tool is proprietary.
<table>
<thead>
<tr>
<th>Pillar</th>
<th>Recommendation</th>
<th>Example Indicators</th>
</tr>
</thead>
</table>
| Governance       | Describe the board’s oversight of climate-related risks and opportunities.      | — Process for informing the Board/Board committees of climate-related issues / opportunities  
|                  |                                                                                | — Alignment of governance processes and controls for climate-related and financial information                                                    |
|                  | Describe management’s role in assessing and managing climate-related risks and opportunities. | — A formal organizational structure of governance oversight and management responsibilities of climate-related risks and opportunities  
|                  |                                                                                | — Frequency of reporting by management regarding climate-related risks and opportunities                                                        |
| Strategy         | Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. | — Organizational exposure to each of the following: physical risk, transition risk, and opportunity, is described  
|                  |                                                                                | — A description of the timeframe of risks is provided                                                                                              |
|                  | Describe the impact of climate-related risks and opportunities on the organization’s business, strategy, and financial planning. | — A description of the impact of climate risks and opportunities on strategy is provided  
|                  |                                                                                | — A process for prioritization and timing of climate risks/opportunities is provided                                                              |
|                  | Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. | — Types of climate scenario analysis conducted or planned to be conducted are described  
|                  |                                                                                | — Time horizons, emissions scenarios, and other key methodological details are disclosed                                                             |
| Risk Management  | Describe the organization’s processes for identifying and assessing climate-related risks. | — Process for climate risk identification and assessment  
|                  |                                                                                | — Process for determining materiality (free from bias) and “substantive financial impact”                                                        |
|                  | Describe the organization’s processes for managing climate-related risks.        | — Assigned responsibilities for decision making to mitigate, transfer, accept or control climate-related risks  
|                  |                                                                                | — Categorization of risks into transition or physical                                                                                                |
|                  | Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management. | — Process for integrating risks into broader risk management activities  
<p>|                  |                                                                                | — Process for establishing internal controls and assurance over climate risks                                                                  |</p>
<table>
<thead>
<tr>
<th>Pillar</th>
<th>Recommendation</th>
<th>Example Indicators</th>
</tr>
</thead>
</table>
| Metrics and Targets | Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. | — Measurable climate adaptation and resilience metrics  
— Metrics assessing the integration of climate scenario analysis findings into strategic and financial planning processes |
| | Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. | — Disclosure of GHG emissions over historical periods for trends analysis  
— Alignment with the GHG protocol methodology |
| | Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. | — Disclosure of targets, tied to strategy and scenario analysis  
— Disclosure of GHG, water, waste management, methane, renewable energy targets (as applicable) |
METHODOLOGY

To conduct the study, we applied our proprietary Benchmarking Tool to the publicly available disclosures of 50 companies. The companies were chosen from the list of public supporters of the TCFD, ensuring a cross-section of industries and geographies are represented. Companies were selected in an arbitrary manner.

The following sectors were chosen for analysis:
- Financials
- Technology & Communications
- Transportation
- Extractives & Minerals Processing
- Infrastructure
- Renewable Resources
- Resource Transformation
- Services

The industry sectors are defined based on guidance provided by the Sustainable Accounting Standards Board (SASB), and are selected based on the companies currently supported by WSP in relation to TCFD, where we have in-depth understanding of the sector's maturity. The following sectors were not included in the analysis, as few companies in these sectors have disclosed sufficient TCFD-related / climate risk data or reports to allow adequate analysis. These sectors included:
- Food & Beverage
- Healthcare

The Benchmarking Tool was applied to the most recently available public disclosures (as of June 2020). We did not rely solely on TCFD reports to conduct our analysis, as many companies disclose climate-related information in multiple reports or documents other than dedicated TCFD reports. However, if a TCFD supporter had not provided any climate-relevant reporting as of June 2020, they were excluded from the analysis. Possible sources of information included:
- Annual reports or other financial reporting
- TCFD or Climate Change reports
- 2019 CDP reporting
- Sustainability or ESG reporting

In the event of a discrepancy between available reporting within the same fiscal year, preference was given in the order of the disclosures as listed above. Disclosures released prior to the most recent report were not consulted, unless explicitly referenced by the recent disclosures.

The results were collected and analyzed, with the key findings presented in the next section.
Table 2.1: Example Indicators from our TCFD Benchmarking Tool

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financials</td>
<td>14</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>5</td>
</tr>
<tr>
<td>Services</td>
<td>5</td>
</tr>
<tr>
<td>Transportation</td>
<td>5</td>
</tr>
<tr>
<td>Resource Transformation</td>
<td>5</td>
</tr>
<tr>
<td>Extractives &amp; Mineral Processing</td>
<td>5</td>
</tr>
<tr>
<td>Renewable Resource</td>
<td>5</td>
</tr>
<tr>
<td>Technology &amp; Communications</td>
<td>6</td>
</tr>
</tbody>
</table>

WSP - ADVANCING MEANINGFUL CLIMATE ACTION FROM TCFD DISCLOSURES
Study Results

PRIMARY OBSERVATIONS

Our study reviewed TCFD disclosures and assessed how many indicators within our Benchmarking Tool the disclosures addressed. When a company effectively addresses more indicators, it has more robust disclosures with richer information available for stakeholders. As highlighted in our methodology section, our indicators are chosen to go beyond the TCFD recommendations and assess deeper elements of a company’s management of climate-related risks and opportunities. When companies achieve more indicators in one TCFD pillar than others, they are most advanced in that pillar. The purpose of the study is not to look at individual companies in detail, but to address overall trends.

Figure 3.1 indicates sector-based performance across TCFD pillars. Generally, disclosures address 50–60% of indicators. Higher performing sectors identified included Financials and Technology, with Renewable Resources and Services representing poorer performing sectors.

There is low variability across the four TCFD pillars. On average, disclosures address very similar indicators in governance, strategy, risk management, and metrics and targets. This observation is true across industries. The results show that there are indicators that companies are frequently addressing, and some indicators that are frequently not addressed.
Key sectoral observations include:

**THE FINANCIAL SERVICES SECTOR IS SETTING THE EXAMPLE:**
At its onset, the TCFD was focused on the climate-related risks of financial institutions because they pose a systemic threat to the global financial system. Financial institutions rely on TCFD disclosure by investees to evaluate these risks. As such, they are dedicated to addressing their own climate risks and opportunities through disclosure.

**THE TECHNOLOGY AND RESOURCES SECTORS ARE EXPERIENCING STRONG STAKEHOLDER PRESSURE**
Technology, extractives, and resource transformation all received strong scores in our assessment. Disclosure by these entities is more developed due to the strong stakeholder pressure these sectors experience in relation to climate risks and opportunities.

**RENEWABLE RESOURCES AND SERVICES ARE FOUND TO BE BEHIND IN DISCLOSURES DUE TO LACK OF STRONG GOVERNANCE AND RISK MANAGEMENT STRUCTURES:**
Companies in these sectors lacked formal structures to manage climate-related risks and opportunities, thereby inhibiting more robust management of climate change impacts. There are many possible reasons for this. For the renewable resources sector, as companies in this sector are perceived as being inherently beneficial to the management of climate risk, they do not produce detailed reporting. However, this ignores the possibility that climate change will impact the renewable resource (or service) industry through physical impacts and that increased business opportunities due to climate change are not worth disclosing.

Similar observations are noted when assessing across geographies (Figure 3.2). The research indicates that companies perform evenly across the TCFD pillars. Particularly, the average pillar performance is very close to the overall geographic average. There are two key observations drawn from Figure 3.2:

**COMPANIES FROM EUROPE AND NORTH AMERICA PERFORM THE STRONGEST,**
with Oceania just behind and Asia significantly behind. The results align with an understanding of these jurisdictions regulatory and stakeholder environments. In our experience, European and North American companies face the strongest stakeholder pressure to manage climate change, including disclosing against the TCFD.

**IN THE ASIAN AND OCEANIC REGIONS, THERE IS REDUCED STAKEHOLDER AND CULTURAL PRESSURE**
to disclose climate change risks. However, across Asia, the risk of impact from climate change is elevated compared to other regions and will likely drive the increase in focus and strength of climate disclosures.

10. Germanwatch Climate Risk Index 2020
These observations suggest that companies proceed through various stages in their response and level of maturity development with regards to their TCFD response. In reviewing the reports, a correlation became clear, where certain key thresholds needed to be met before more advanced indicators were achieved:

— Typically, if a strong governance framework were found to be in place, then it lead to the inclusion of an effective strategic or risk based improvements approach to climate change.

— Scenario analysis needed to be conducted before more advanced strategic improvements and advanced metrics or targets could be developed.

An additional observation made within the study was that only 8.5% of the companies surveyed disclosed meaningful climate-related information within their annual reports. The majority disclosed climate information in dedicated TCFD reports, sustainability reports, or CDP reporting. Companies generally did not indicate whether they intended to disclose in mainstream financial filings in the future.

In the next section, we explore some interesting patterns we observed in our data and how they can be useful for understanding a company’s overall maturity.
UNDERSTANDING LEADING INDICATORS AND IDENTIFYING PHASES OF MATURE

We considered the indicators in our research and asked how frequently each indicator was addressed by companies in the study. It became immediately clear that some indicators were frequently addressed, while others were rarely addressed.

We noticed some indicators were addressed by 80% of the companies analyzed (or more), with many of these indicators attributable to activities that companies may conduct at the beginning of their TCFD journey (such as identifying risks or calculating GHG emissions). Further, there were indicators addressed by 33% of companies or less, which represented what we considered 'advanced activities'. These included tracking metrics for climate resilience. Two other groups of indicators were identified between the two extremes. We labelled the four groups as four "Phases". The choice of labelling each as a "Phase" is on the qualitative observation that they are implicitly tied to TCFD maturity. See Table 3.3 for details.
Table 3.3: TCFD Maturity Roadmap

<table>
<thead>
<tr>
<th>Governance</th>
<th>Strategy</th>
<th>Risk Management</th>
<th>Metrics &amp; Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Understanding &amp; Assessing</strong></td>
<td><strong>Building Capacity</strong></td>
<td><strong>Mainstreaming</strong></td>
<td><strong>Transforming Sustainability &amp; Resilience</strong></td>
</tr>
<tr>
<td>- Identify specific Board and/or management committees responsible for climate, ESG, or sustainability risks and opportunities</td>
<td>- Integrate climate-related risks and opportunities into governance discussions on a case-by-case basis</td>
<td>- Establish a process and frequency of regularly informing the Board and management on climate-related risks and opportunities</td>
<td>- Integrate climate-related risks and opportunities into the ESG or corporate sustainability policy, strategic business decision-making, and financial planning</td>
</tr>
<tr>
<td>- Integrate climate-related risks and opportunities into governance discussions on a case-by-case basis</td>
<td>- Establish a process for reporting climate information to management and the Board</td>
<td>- Ensure that the Board and executives provide input into the assessment, prioritization, and transfer of climate-related risks and opportunities for further evaluation</td>
<td>- Provide monetary incentives for senior executives and management on progress towards achieving climate-related targets and metrics</td>
</tr>
<tr>
<td><strong>Sustainability &amp; Resilience</strong></td>
<td><strong>Risk Management</strong></td>
<td><strong>Strategy</strong></td>
<td><strong>Governance</strong></td>
</tr>
<tr>
<td>- Assign responsibilities to groups or individuals for overall risk management, including climate change</td>
<td>- Establish processes for identification, qualitative assessment, and management of climate-related risks and opportunities on a case-by-case basis</td>
<td>- Identify baseline operational greenhouse gas (GHG) emissions and climate hazards</td>
<td>- Identify specific Board and/or management committees responsible for climate, ESG, or sustainability risks and opportunities</td>
</tr>
<tr>
<td>- Establish processes for identification, qualitative assessment, and management of climate-related risks and opportunities on a case-by-case basis</td>
<td>- Establish processes for identification, qualitative assessment, and management of climate-related risks and opportunities</td>
<td>- Examine qualitative impacts of identified climate risks and opportunities at the portfolio level and for key suppliers</td>
<td>- Integrate baseline climate-related risks and opportunities into governance discussions on a regular basis</td>
</tr>
<tr>
<td>- Conduct regular materiality assessments</td>
<td>- Qualitatively assess organizational exposure to physical and transition climate-related risks and opportunities at the portfolio level and for key suppliers</td>
<td>- Quantitatively assess risks and opportunities on business strategy and financial planning</td>
<td>- Establish processes for determining climate-related risks and opportunities and for key suppliers and senior executives to provide input into the assessment, prioritization, and transfer of climate-related risks and opportunities for further evaluation</td>
</tr>
<tr>
<td><strong>WSP’s Global TCFD Practice</strong></td>
<td><strong>Metrics &amp; Targets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Develop annual GHG inventory covering Scope 1, Scope 2, and applicable Scope 3 GHG emissions</td>
<td>- Annually measure and report Scope 1, Scope 2, and applicable Scope 3 emissions</td>
<td>- Annually verify the GHG inventory under internationally recognized assurance standards</td>
<td>- Verify GHG reduction targets under the Science-Based Targets initiative (SBTi)</td>
</tr>
<tr>
<td>- Develop annual water and waste inventories</td>
<td>- Establish energy, water, waste, and/or land use reduction targets, if applicable</td>
<td>- Establish targets around sustainable finance, or renewable energy investment</td>
<td>- Align the targets with scenario analysis and strategic planning process</td>
</tr>
<tr>
<td>- Establish science-based GHG reduction targets</td>
<td>- Develop metrics to measure adaptive capacity and resilience and explore a resilience target</td>
<td>- Establish and track Key Performance Indicators to monitor progress towards enhancing adaptive capacity and resilience</td>
<td>- Establish climate adaptation metrics, transition risk and opportunity metrics (e.g., divestment from fossil fuels and investment in carbon removal)</td>
</tr>
</tbody>
</table>
Each of the Phases in Table 3.3 could therefore represent different ‘Phases of Maturity’ that companies achieve in their TCFD journey. The list below highlights the narrative that emerges in the groups identified in the above analysis:

**PHASE 1: BASIC**

**Understanding and Assessing:** Identification and understanding of climate risk. Companies are just beginning their TCFD journey, and have disclosed existing processes and knowledge on climate change. Many now use the TCFD framework to outline their GHG emissions profile and targets.

**PHASE 2: IMPROVING**

**Building Capacity:** Companies are beginning to update their governance and risk management processes and building their capacity to manage climate-related risks and opportunities on a long-term basis.

**PHASE 3: MATURE**

**Mainstreaming:** Companies have developed and implemented updates to processes and policies. They have conducted one or more different scenario analysis and are beginning to understand the material risks to their organization. They have a climate plan, inclusive of metrics and targets to support monitoring of the plan.

**PHASE 4: LEADING**

**Transforming Sustainability and Resilience:** Companies have begun to address adaptation and resilience and to transform to become resilient. Companies have also implemented internal control framework to support effective governance and risk management activities in relation to climate change.
We must be clear that the Phases of Maturity are not determinative of the ability of a company to adapt and be resilient to the effects of climate change (physical or transition). Only an in-depth analysis of the company, beyond disclosures, can provide that insight. We anticipate conducting follow-up studies where the framework developed here is combined with in-depth company assessments to validate the findings and enhance the model.

The analysis and framed four phases of maturity described above was then used and applied to the companies in our study. The results can be found in Figure 3.4. Through this analysis, a company must satisfy >2/3 of the indicators in a Phase (for each of the TCFD pillars) to proceed to the next Phase.

As would be expected, the majority are in Phase 1 — the early stages of considering and responding to climate change risk / opportunities in the TCFD context. However, as evidenced, the financial services and technology industries hold the highest number of companies that fall into Phase 3. No company in the analysis achieved Phase 4.
**Key takeaways:**

**MOST DISCLOSING COMPANIES ARE AT THE LOWER LEVEL OF MATURITY:** Some companies are only now understanding what climate change impacts mean to their business, while there are select few taking concrete actions and truly enhancing their business resilience to the physical and transition impacts of climate change. This is largely because progressing through the Phases takes time, and most companies have only been making progress for a couple of years. We expect to see greater average maturity in future years.

**THE RESULTS OF THE ADVANCED DATA ANALYSIS ALIGN WITH THE PRELIMINARY CONCLUSIONS:** The results suggest that the financial services and technology sectors have the most advanced disclosures, as demonstrated in Figures 3.1 and 3.4. This agrees with the observations made previously in Figure 3.1 and is primarily driven by the strong stakeholder pressure within those industries and the general culture of innovation.

**UNIQUE INSIGHTS ARE NOTED:** While the results generally align with a more cursory review of the data, the Phases of Maturity reveal some additional insights. Notably, the financial services sector has several companies in Phase 3. In our observations, through advising many in the financial services sector, financial institutions are most likely (at this point in time) to have implemented more robust governance processes and conducted deeper scenario analysis (particularly through industry pilots).

Further, while extractives and minerals appeared comparable to financial services and technology and communications, when applying the Phases of Maturity approach, it became clear that most companies were still in their infancy in disclosures (e.g., so more disclosing but without the level of detail and sophistication as those in the financial services sector). We believe that companies in this sector may be addressing many indicators, but due to a lack of deep structural change and commitment to building climate resilience there appears to be no drivers for advancing increased disclosure.

**NO COMPANY IN THE ANALYSIS HAS FULLY REACHED PHASE 4:** While companies addressed some indicators consider to be that of a phase 4 maturity, no one company was found to address the sufficient number of indicators to demonstrate Phase 4 maturity. This is not unexpected, as the TCFD recommendations were only released just over three years ago. It will be interesting to watch whether increasing interest in TCFD disclosures drives not just more disclosures, but more advanced, detailed and sophisticated disclosures.

Just as the framework was useful in differentiating between the relative maturities of industries, we believe it will also be useful in differentiating maturity between individual companies helping investors and stakeholders make informed investment decisions. Further, it can be useful to help companies understand how to advance their TCFD disclosures, which is discussed in the next chapter.
Improving Maturity

The goal of the TCFD is to allow investors to make informed capital allocation decisions. However, rather than removing poor climate-performing companies from the portfolio, many investors prefer to engage investees and work together to drive improvements.

The four Phases of Maturity identified in Chapter 5 presents a useful framework for allowing investors to understand the maturity of their portfolio companies, and to improve the management of climate-related risks.

This section outlines a narrative for understanding the activities and thought processes of companies in each Phase of Maturity, and actions that a company can take to advance to the next Phase. The narrative is designed to describe a company in any sector or geography. These narratives are informed by our experience in working with investors and companies across sectors around the world.
**Phase 1: Basic**

Companies in this Phase are...

...understanding their context and just getting started. They understand implicitly that climate change is a material risk to the organization, and that it presents a possible source of business opportunity. It may be the case that the company already makes significant efforts to manage the impacts of climate change, but those activities are not centralized and/or not described coherently through disclosure.

No formal structures at the board and/or executive management are in place to provide oversight and support climate risks management activities within the company. However, it is likely a risk or sustainability-related committee dedicated to environmental and social issues which indirectly addresses climate change risks is in place, but not in a direct or well-informed manner.

Similarly, they have a high-level of understanding of the climate risks and opportunities facing the organization. However, no detailed analysis has been conducted. It is likely that they already disclose GHG emissions through a sustainability report and/or other regulatory reporting format / requirement.

To improve maturity, companies should...

... focus on governance and identify what they need to do to manage climate-related risks and opportunities. In particular, they should understand what requirements and comfort investors are seeking in relation to the identification and management of climate risk impacts. They should benchmark the disclosures of their peers.

A key first step needs to be implementation of a sound governance model. Clear tone from the top and accountabilities will help demonstrate to the company and its stakeholders that climate impacts are being taken seriously.

Further, companies should begin preparing their first set of climate change related disclosures leveraging relevant framework, guidelines, with a primary focus on TCFD. The act of compiling the report will help in identifying and engaging the right teams, understand what is currently being done on climate change, and where the potential gaps may exist.

**Phase 2: Improving**

Companies in this Phase are...

... establishing the necessary structures to enable strong management of climate-related risks and opportunities. This is perhaps the longest and most contentious Phase, as it can involve structural changes that take time and require detailed buy-in.

Board committees and the executive committee are formed. The process of how these committees will address climate related issues is in the process of being formalized. The board and management undergo extensive education in relation to climate change and how it impacts the company and society as a whole.

The specific climate-related risks and opportunities are studied in detail. Climate change physical and transitional risks are clearly articulated, as well as the opportunities, both on a sectoral and geographical basis (where applicable). The possible impacts on strategy and financial planning are understood qualitatively.

Companies in this Phase have begun to prepare to conduct a climate change assessment through the use of scenario analysis. They are likely consulting with internal teams to understand what data is available and which scenarios are most relevant given corporate strategies.

Their risk management team establishes processes for climate risk identification, monitoring, and mitigation activities. Key roles and responsibilities are established for monitoring climate risks.

Metrics are beginning to be developed, particularly those for opportunities as they will become key internal tools to build consensus and provide business case for increased internal focus and support.
<table>
<thead>
<tr>
<th>Phase 3: Mature</th>
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<tbody>
<tr>
<td><strong>To improve maturity, companies should ...</strong></td>
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<tr>
<td>... keep building on the momentum. In entering Phase 2, the company recognizes that this is important and that action is necessary. This is a difficult stage — so the more education and training that can be provided at all levels, the better. Keep engaging teams, an keep them updated on the risks and how peers and competitors are responding and evolving to the risks. As processes and procedures start to put into place, keep evolving them to become robust and enhanced.</td>
</tr>
<tr>
<td>Further, companies should begin to develop measurable and quantitative approaches to managing climate risks and opportunities.</td>
</tr>
<tr>
<td>In addition, companies should begin exploring how to disclose climate-related information in mainstream financial disclosures.</td>
</tr>
<tr>
<td><strong>Companies in this Phase are ...</strong></td>
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<tr>
<td>... finalizing and fully integrating their climate plans. They have detailed processes for informing the relevant board and management committees on climate matters, including details on the frequency of reporting and the internal controls over climate-related data.</td>
</tr>
<tr>
<td>Companies have a process for monitoring how climate change is impacting the organization, and the emergence of new risks and opportunities and the impacts on society. They have conducted a detailed scenario analysis and established organizational resilience to climate change. The scenario analysis informs strategy and risk management activities.</td>
</tr>
<tr>
<td>There is a program for tracking climate risks and opportunities through metrics and targets, with advanced programs to managing climate change impacts for example establishing an internal carbon price. Meaningful climate-related information is disclosed in mainstream financial reporting.</td>
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<table>
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<th>Phase 4: Leading</th>
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<tr>
<td><strong>To improve maturity, companies should ...</strong></td>
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<tr>
<td>... begin considering the long-term evolution of the climate change plan. This includes looking to develop stronger metrics and targets, aligned to scenario analysis and beginning to develop an approach to building climate resilience.</td>
</tr>
<tr>
<td><strong>Companies in this Phase are ...</strong></td>
</tr>
<tr>
<td>... building their resilience and adaptive capacity to the physical and transition impacts of climate change. Beyond understanding the risks and opportunities, companies are ensuring that the correct actions are being taken to minimize risks and maximize opportunities over the long term. The scenario analysis is adapted to consider how the company’s adaptive capacity improves over the long-term outcomes. Companies have developed metrics and targets specifically tailored to adaptation.</td>
</tr>
<tr>
<td>Further, they have formalized governance and risk management processes with robust internal controls over the information being used, and the accuracy of the programs.</td>
</tr>
<tr>
<td><strong>To maintain maturity, companies should ...</strong></td>
</tr>
<tr>
<td>... stay vigilant and constantly monitor the impact of climate change. Further, continue to monitor investor expectations, broader stakeholders and peer activities for evolving practices.</td>
</tr>
<tr>
<td>Update the climate plan and reporting in alignment with normal 3-5 year business planning cycles. Investor expectations continue to increase, and leading firms must innovate to maintain their leadership.</td>
</tr>
</tbody>
</table>
It is possible that a company will not necessarily see every aspect of itself in each of the phases described. While our data suggests many companies fall within distinct Phases based on the level of activities and/or disclosures, each company’s experience will be unique.

Overall, we believe this analysis demonstrates that aligning with the TCFD recommendations may seem daunting, but there are actions you can take today to leverage processes already in place.

This paper introduces our discovery of the four Phases of Maturity. We expect TCFD disclosures to increase in volume and maturity over time, which will give us greater insight on how the 4 Phases apply. In future work, we intend to answer questions such as:

— Which Phase is most difficult to complete?
— On average, how long does each Phase last? Are there specific sectoral considerations?
— Should all companies strive for Phase 4?
— Do any of the Phases require or are highly impacted/reliant on external factors such as regulatory development or industry collaboration?

At WSP, we work with companies and investors to assess climate risk and opportunities, build resilience, and facilitate effective disclosure. The next section will outline how we help investors and companies understand maturity, and move to the highest Phase.
QUESTIONS FOR INVESTORS AND BOARDS

As more and more stakeholders become concerned about climate risk and opportunities for a company, more will be asking questions to try and understand a company’s management of climate change. Here are a few questions an investor or a board member can ask of a company to assess its climate-readiness:

GOVERNANCE:
— Are there individuals or a committee explicitly responsible for climate change at the board or executive management levels?
— Is there a clear and robust process for the board and management to receive and assess climate-related information?

STRATEGY:
— Has the company assessed physical and transitional risks, as well as opportunities? What is the relevant timeframe for these risks / opportunities?
— Does the company know how climate change may impact financial and business planning?
— Is the company conducting scenario analysis to test resilience? is it considering physical and transitional risks, under business-as-usual and Paris-aligned scenarios?

RISK MANAGEMENT:
— How is the company tracking and managing climate-related risks?
— Are climate-related risks incorporated into traditional risk-management processes? Is climate change considered material? If climate change is not considered material, what is the rationale?

METRICS AND TARGETS:
— Are metrics used to track climate impacts that are tied to key risks and opportunities, as well as scenario planning?
— Is the company using targets that help the company to achieve alignment with the Paris Agreement?
WSP’s Global TCFD Practice

WHO WE ARE
At WSP, we work with leading international investors and companies on their climate risk, resilience, and disclosure programs. WSP is one of the world’s leading professional services consulting firms. We are strategic advisors and technical experts with an expansive global network of trusted consultants, engineers, scientists, project managers, planners, and environmental specialists, as well as design and program management professionals. With over 43,000 globally, we deliver strategic advice that will help investors and companies grow for decades to come.

WSP is committed to helping make investors and companies Future Ready® through our work. Future Ready® is an innovative program that enables our staff to see the future more clearly and design for it today. Through Future Ready®, we deliver project solutions that support a prosperous, resilient, resource-efficient future.

OUR SERVICES
We have experience leading organizations at all stages of their maturity. Our services are designed to help organizations improve their climate risk and disclosure programs informed by climate science and emerging best practices. Our advice is informed by experts, including climate scientists, climate engineers, architects, and designers. We partner when necessary with leading climate science institutions and international thought leaders to bring leading practices to our clients.

“Through our Climate Risk and Resilience (CR+R) work with WSP, we have been able to establish a bold, industry-leading CR+R framework, while aligning this work with our existing ESG and Enterprise Risk Management infrastructure. As a function of this work, WSP also supported us in assessing our TCFD and SASB alignment efforts and assisted us in developing a clear roadmap to alignment that will further strengthen our ESG leadership.”

FORTUNE 50 IT COMPANY
TCFD BENCHMARKING AND GAP ANALYSIS
We look at the disclosures produced by your industry peers and competitors, and identify leading practices within your industry. We leverage our proprietary Benchmarking Tool, used in this study, to identify common indicators and practices.

Further, we use our Benchmarking Tool to establish the gaps in your existing climate change or sustainability disclosures and areas of enhancement.

While benchmarking can be useful at any stage of the TCFD journey, it is particularly useful for organizations at Phase 1. Our benchmarking and gap analysis enhances your understanding of what you need to do to enhance your climate disclosures, thereby advising your climate risk and disclosure framework more broadly.

CLIMATE RISK AND OPPORTUNITY ANALYSIS
We apply our understanding of climate science, policy, economics, and climate solutions to help identify your top climate risks and opportunities.

We apply climate scenario analysis to help test the resilience of your organization to multiple scenarios, including a 2-degree scenario.

We help you to identify your top climate-related risks and opportunities, and to quantify the impact. Further, we have developed metrics that not only measure risk, but also resilience to climate impacts as well as progress on climate opportunities.

MATERIALITY ASSESSMENT
We help identify, assess, and prioritize climate-related issues important to an organization and its stakeholders, in alignment with the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and other frameworks.

We help in identifying and consulting stakeholders on sustainability report focus and content, including engagement aligned with GRI or SASB materiality assessment process.
TCFD ROADMAP AND DISCLOSURE

We co-design a feasible and integrated TCFD roadmap with actionable steps to achieve the goals and targets set to operationalize sustainability and climate resilience across your organization (with critical business functions such as enterprise risk management, business continuity planning, financial management, asset management, procurement, operations, product or service development, investor and customer relations) and within the communities where employees live and work.

We develop content appropriate across relevant reporting and disclosure frameworks, with goals to communicate progress, increase transparency, minimize reporting burden, and improve the quality of reporting for the benefit of investors and other stakeholders.

METRICS AND TARGETS DEVELOPMENT

We help identify decision-useful metrics and targets to track your climate progress through our understanding of your company and how it will be impacted by climate change. The metrics and targets are informed by your scenario analysis and organizational strategic goals.

The metrics and targets will help you make strategic decisions including asset allocation and strategic investment.

ADAPTIVE CAPACITY AND RESILIENCE ASSESSMENTS

We help you identify and understand risks and adapt to them, minimize their impact, and take maximum advantage of opportunities.

We bring in a team of experts — from engineers, scientists, designers, architects — to help build resilience to all asset types and aspects of the company, through site visits and desktop research. For example, we look at your physical assets and assess their structural integrity to climate change. Further, we look at your business model to assess the impact of the transition to a low carbon economy.
WSP’s Global TCFD Practice

WSP operates a Global TCFD Practice with experts around the world, working with leading institutions. We readily share knowledge and experiences, allowing our team to bring both a local and international perspective to our client engagements.

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As one of the world’s leading professional services firms, WSP provides engineering and design services to clients in the Transportation & Infrastructure, Property & Buildings, Environment, Power & Energy, Resources and Industry sectors, as well as strategic advisory services. WSP’s global experts include engineers, advisors, technicians, scientists, architects, planners, surveyors and environmental specialists, as well as other design, program and construction management professionals. Our talented people are well positioned to deliver successful and sustainable projects, wherever our clients need us.

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