This is an extract from the Final Recommendations Report. View the document in full here.

E Key Issues Considered and Areas for Further Work

The diverse perspectives of Task Force members as well as outreach efforts, including two public consultations, resulting in over 500 responses, hundreds of industry interviews, several focus groups, and multiple webinars, provided valuable insight into the challenges that different organizations—both financial and non-financial—may encounter in preparing disclosures consistent with the Task Force's recommendations. The Task Force considered these issues and others in developing and then finalizing its recommendations and sought to balance the burden of disclosure on preparers with the need for consistent and decision-useful information for users (i.e., investors, lenders, and insurance underwriters). This section describes the key issues considered by the Task Force, significant public feedback received by the Task Force related to those issues, the ultimate disposition of the issues, and, in some cases, areas where further work may be warranted. Figure 9 summarizes areas the Task Force identified, through its own analysis as well as through public feedback, as warranting further research and analysis or the development of methodologies and standards.

Figure 9

Key Areas for Further Work

Relationship to Other Reporting Initiatives	Encourage standard setting organizations and others to actively work toward greater alignment of frameworks and to support adoption
Scenario Analysis	Further develop applicable 2°C or lower transition scenarios and supporting outputs, tools, and user interfaces Develop broadly accepted methodologies, datasets, and tools for scenario-based evaluation of physical risk by organizations Make datasets and tools publicly available and provide commonly available platforms for scenario analysis
Data Availability and Quality and Financial Impact	Undertake further research and analysis to better understand and measure how climate-related issues translate into potential financial impacts for organizations in financial and non-financial sectors Improve data quality and further develop standardized metrics for the financial sector, including better defining carbon-related assets and developing metrics that address a broader range of climate-related risks and opportunities Increase organizations' understanding of climate-related risks and opportunities
Example Disclosures[49]	Provide example disclosures to assist preparers in developing disclosures consistent with the Task Force's recommendations

[49] In response to the second consultation, organizations asked for example disclosures to gain a better understanding of how the recommended information may be disclosed. The Task Force acknowledges the development of these examples as an area of further work.

1. Relationship to Other Reporting Initiatives

Through the Task Force's outreach efforts, some organizations expressed concern that multiple disclosure frameworks and mandatory reporting requirements increase the administrative burden of disclosure efforts. Specifically, the additional time, cost, and effort required to analyze and disclose new climate-related information could penalize those with less capacity to respond.

The Task Force considered existing voluntary and mandatory climate-related reporting frameworks in developing its recommendations and provides information in the Annex on the alignment of existing frameworks, including those developed by the CDP (formerly the Carbon Disclosure Project), Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), and the Sustainability Accounting Standards Board (SASB), with the Task Force's recommended disclosures. The Task Force expects preparers disclosing climate-related information under other regimes will be able to use existing processes and content when developing disclosures based on the Task Force's recommendations.

The Task Force's recommendations provide a common set of principles that should help existing disclosure regimes come into closer alignment over time. Preparers, users, and other stakeholders share a common interest in encouraging such alignment as it relieves a burden for reporting entities, reduces fragmented disclosure, and provides greater comparability for users. The Task Force also encourages standard setting bodies to support adoption of the recommendations and alignment with the recommended disclosures.

2. Location of Disclosures and Materiality

In considering possible reporting venues, the Task Force reviewed existing regimes for climate-related disclosures across G20 countries. While many G20 countries have rules or regulatory guidance that require climate-related disclosure for organizations, most are *not* explicitly focused on climate-related *financial* information.[50] In addition, the locations of these disclosures vary significantly and range from surveys sent to regulators to sustainability reports to annual financial filings (see Appendix 4).

The Task Force also reviewed financial filing requirements applicable to public companies across G20 countries and found that in most G20 countries, issuers have a legal obligation to disclose material information in their financial reports—which includes material, climate-related information. Such reporting may take the form of a general disclosure of material information, but many jurisdictions require disclosure of material information in specific sections of the financial filing (e.g., in a discussion on risk factors).[51]

Based on its review, the Task Force determined that preparers of climate-related financial disclosures should provide such disclosures in their mainstream (i.e., public) annual financial filings.[52] The Task Force believes publication of climate-related financial information in mainstream financial filings will foster broader utilization of such disclosures, promoting an informed understanding of climate-related issues by investors and others, and support shareholder engagement. Importantly, in determining whether information is material, the Task Force believes organizations should determine materiality for climate-related issues consistent with how they determine the materiality of other information included in their financial filings. In addition, the Task Force cautions organizations against prematurely concluding that climate-

[50] Organization for Economic Co-operation and Development (OECD) and CDSB, *Climate Change Disclosure in G20 Countries: Stocktaking of Corporate Reporting Schemes,* November 18, 2015.

[51] N. Ganci, S. Hammer, T. Reilly, and P. Rodel, *Environmental and Climate Change Disclosure under the Securities Laws: A Multijurisdictional Survey,* Debevoise & Plimpton, March 2016.

[52] To the extent climate-related disclosures are provided outside of financial filings, organizations are encouraged to align the release of such reports with their financial filings.

related risks and opportunities are not material based on perceptions of the longer-term nature of some climate-related risks.

As part of the Task Force's second public consultation, some organizations expressed concern about disclosing information in financial filings that is not clearly tied to an assessment of materiality. The Task Force recognizes organizations' concerns about disclosing information in annual financial filings that is not clearly tied to an assessment of materiality. However, the Task Force believes disclosures related to the Governance and Risk Management recommendations should be provided in annual financial filings. Because climate-related risk is a non-diversifiable risk that affects nearly all sectors, many investors believe it requires special attention. For example, in assessing organizations' financial and operating results, many investors want insight into the governance and risk management context in which such results are achieved. The Task Force believes disclosures related to its Governance and Risk Management recommendations directly address this need for context and should be included in annual financial filings.

For disclosures related to the Strategy and Metrics and Targets recommendations, the Task Force believes organizations should provide such information in annual financial filings when the information is deemed material. Certain organizations—those in the four non-financial groups that have more than one billion USDE in annual revenue—should consider disclosing information related to these recommendations in other reports when the information is not deemed material and not included in financial filings.[53,54] Because these organizations are more likely than others to be affected financially over time due to their significant GHG emissions or energy or water dependencies, investors are interested in monitoring how the organizations' strategies evolve.

In addition, the Task Force recognizes reporting by asset managers and asset owners to their clients and beneficiaries, respectively, generally occurs outside mainstream financial filings (Figure 10). For purposes of adopting the Task Force's recommendations, asset managers and asset owners should use their existing channels of financial reporting to their clients and beneficiaries where relevant and feasible. Likewise, asset managers and asset owners should consider materiality in the context of their respective mandates and investment performance for clients and beneficiaries.

Figure 10

Reporting by Asset Owners

The financial reporting requirements and practices of asset owners vary widely and differ from what is required of organizations with public debt or equity. Some asset owners have no public reporting, while others provide extensive public reporting. For purposes of adopting the Task Force's recommendations, asset owners should use their existing channels of financial reporting to their beneficiaries and others where relevant and feasible.

Reporting by Asset Managers

Reporting to clients by asset managers also takes different forms, depending on the requirements of the client and the types of investments made. For example, an investor in a mutual fund might receive quarterly, or download from the asset manager's website, a "fund fact sheet" that reports, among other information, the top holdings by value, the top performers by returns, and the carbon footprint of the portfolio against a stated benchmark. An investor in a segregated account might receive more detailed reporting, including items such as the aggregate carbon intensity of the portfolio compared with a benchmark, the portfolio's exposure to green revenue (and how this changes over time), or insight into portfolio positioning under different climate scenarios. The Task Force appreciates that climate-related risk reporting by asset managers is in the very early stages and encourages progress and innovation by the industry.

[53] The Task Force chose a one billion USDE annual revenue threshold because it captures organizations responsible for over 90% of Scope 1 and 2 GHG emissions in the industries represented by the four non-financial groups (about 2,250 organizations out of roughly 15,000).

[54] "Other reports" should be official company reports that are issued at least annually, widely distributed and available to investors and others, and subject to internal governance processes that are substantially similar to those used for financial reporting.

3. Scenario Analysis

As part of the Task Force's second public consultation, many organizations said scenario analysis is a useful tool to help assess risks and understand potential implications of climate change; however, they also identified areas where the Task Force's recommendations and guidance could be improved. In particular, organizations asked the Task Force to identify standardized climate-related scenarios for organizations to use and clarify the information related to scenarios that should be disclosed. They also noted expectations around disclosures and climate-related scenario analysis should be proportionate to the size of the reporting entity and not onerous for smaller organizations. In addition, some organizations noted that the disclosures related to strategy could put organizations at greater risk of litigation given the high degree of uncertainty around the future timing and magnitude of climate-related impacts.

In finalizing its recommendations and guidance, the Task Force clarified organizations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario and, where relevant, scenarios consistent with more extreme physical risks. To address concerns about proportionality, the Task Force established a threshold for organizations in the four non-financial groups that should perform more robust scenario analysis and disclose additional information on the resiliency of their strategies.

On the issue of recommending specific standardized or reference climate-related scenarios for organizations to use, Task Force members agreed that while such an approach is intuitively appealing, it is not a practical solution at this time. Existing, publicly available climate-related scenarios are not structured or defined in such a way that they can be easily applied consistently across different industries or across organizations within an industry.

The Task Force recognizes that incorporating scenario analysis into strategic planning processes will improve over time as organizations "learn by doing." To facilitate progress in this area, the Task Force encourages further work as follows:

- further developing 2°C or lower transition scenarios that can be applied to specific industries and geographies along with supporting outputs, tools, and user interfaces;
- developing broadly accepted methodologies, data sets, and tools for scenario-based evaluation of physical risk by organizations;
- making these data sets and tools publicly available to facilitate use by organizations, reduce organizational transaction costs, minimize gaps between jurisdictions in terms of technical expertise, enhance comparability of climate-related risk assessments by organizations, and help ensure comparability for investors; and
- creating more industry specific (financial and non-financial) guidance for preparers and users of climate-related scenarios.

4. Data Availability and Quality and Financial Impact

The Task Force developed supplemental guidance for the four non-financial groups that account for the largest proportion of GHG emissions, energy usage, and water usage; and, as part of that supplemental guidance, the Task Force included several illustrative metrics around factors that may be indicative of potential financial implications for climate-related risks and opportunities. As part of the second public consultation, several organizations provided feedback on the illustrative metrics, and common themes included (1) improving the comparability and consistency of the metrics, (2) clarifying the links among the metrics, climate-related risks and opportunities, and potential financial implications, (3) simplifying the metrics, and (4) providing additional guidance on the metrics, including how to calculate key metrics. Organizations also raised concerns about the lack of standardized data and metrics in the financial sector, which complicates preparers' ability to develop decision-useful metrics and users' ability to compare metrics across organizations.

The Task Force recognizes these concerns as well as broader challenges related to data availability and quality, as described below.

- The gaps in emissions measurement methodologies, including Scope 3 emissions and product life-cycle emissions methodologies, make reliable and accurate estimates difficult.[55,56]
- The lack of robust and cost-effective tools to quantify the potential impact of climate-related risks and opportunities at the asset and project level makes aggregation across an organization's activities or investment portfolios problematic and costly.
- The need to consider the variability of climate-related impacts across and within different sectors and markets further complicates the process (and magnifies the cost) of assessing potential climate-related financial impacts.
- The high degree of uncertainty around the timing and magnitude of climate-related risks makes it difficult to determine and disclose the potential impacts with precision.

In finalizing its supplemental guidance, the Task Force addressed the redundancy of the metrics; simplified the non-financial illustrative metrics tables; ensured consistent terminology was used; and clarified the links between the metrics, climate-related risks and opportunities, and potential financial implications. In addition, the Task Force encourages further research and analysis by sector and industry experts to (1) better understand and measure how climate-related issues translate into potential financial impacts; (2) develop standardized metrics for the financial sector, including better defining carbon-related assets; and (3) increase organizations' understanding of climate-related risks and opportunities. As it relates to the broader challenges with data quality and availability, the Task Force encourages preparers to include in their disclosures a description of gaps, limitations, and assumptions made as part of their assessment of climate-related issues.

5. GHG Emissions Associated with Investments

In its supplemental guidance for asset owners and asset managers issued on December 14, 2016, the Task Force asked such organizations to provide GHG emissions associated with each fund, product, or investment strategy normalized for every million of the reporting currency invested. As part of the Task Force's public consultation as well as in discussions with preparers, some asset owners and asset managers expressed concern about reporting on GHG emissions related to their own or their clients' investments given the current data challenges and existing accounting guidance on how to measure and report GHG emissions associated with investments. In particular, they voiced concerns about the accuracy and completeness of the reported data and limited application of the metric to asset classes beyond public equities. Organizations also highlighted that GHG emissions associated with investments cannot be used as a sole indicator for investment decisions (i.e., additional metrics are needed) and that the metric can fluctuate with share price movements since it uses investors' proportional share of total equity.[57]

In consideration of the feedback received, the Task Force has replaced the GHG emissions associated with investments metric in the supplemental guidance for asset owners and asset managers with a weighted average carbon intensity metric. The Task Force believes the weighted

[55] Scope 3 emissions are all indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions. See Greenhouse Gas Protocol, "Calculation Tools, FAQ."

[56] Product life cycle emissions are all the emissions associated with the production and use of a specific product, including emissions from raw materials, manufacture, transport, storage, sale, use, and disposal. See Greenhouse Gas Protocol, "Calculation Tools, FAQ."

[57] Because the metric uses investors' proportional share of total equity, increases in the underlying companies' share prices, *all else equal*, will result in a decrease in the carbon footprinting number even though GHG emissions are unchanged.

average carbon intensity metric, which measures exposure to carbon-intensive companies, addresses many of the concerns raised. For example, the metric can be applied across asset classes, is fairly simple to calculate, and does not use investors' proportional share of total equity and, therefore, is not sensitive to share price movements.

The Task Force acknowledges the challenges and limitations of current carbon footprinting metrics, including that such metrics should not necessarily be interpreted as risk metrics. Nevertheless, the Task Force views the reporting of weighted average carbon intensity as a first step and expects disclosure of this information to prompt important advancements in the development of decision-useful, climate-related risk metrics. In this regard, the Task Force encourages asset owners and asset managers to provide other metrics they believe are useful for decision making along with a description of the methodology used. The Task Force recognizes that some asset owners and asset managers may be able to report the weighted average carbon intensity and other metrics on only a portion of their investments given data availability and methodological issues. Nonetheless, increasing the number of organizations reporting this type of information should help speed the development of better climate-related risk metrics.

6. Remuneration

In the supplemental guidance for the Energy Group, the Task Force asked such organizations to consider disclosing whether and how performance metrics, including links to remuneration policies, take into consideration climate-related risks and opportunities. As part of its second public consultation, the Task Force asked whether the guidance should extend to organizations beyond those in the Energy group and, if so, to which types of organizations. The majority of organizations that commented on this issue responded that the guidance should be extended to other organizations; and many suggested that the guidance should apply to organizations more likely to be affected by climate-related risks. In consideration of the feedback received, the Task Force revised its guidance to ask organizations, where climate-related risks are material, to consider describing whether and how related performance metrics are incorporated into remuneration policies.

7. Accounting Considerations

As part of its work, the Task Force considered the interconnectivity of its recommendations with existing financial statement and disclosure requirements. The Task Force determined that the two primary accounting standard setting bodies, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB), have issued standards to address risks and uncertainties affecting companies. Both International Accounting Standard (IAS) 37 "Provisions, Contingent Liabilities and Contingent Assets" and Accounting Standards Codification (ASC) 450 "Contingencies" provide guidance on how to account for and disclose contingencies. Additionally, IAS 36 "Impairment of Assets" and ASC 360 "Long-lived Asset Impairment" provide guidance on assessing the impairment of long-lived assets. The disclosures of both contingencies and management's assessment and evaluation of long-lived assets for potential impairment are critically important in assisting stakeholders in understanding an organization's ability to meet future reported earnings and cash flow goals.

In most G20 countries, financial executives will likely recognize that the Task Force's disclosure recommendations should result in more quantitative financial disclosures, particularly disclosure of metrics, about the financial impact that climate-related risks have or could have on an organization. Specifically, asset impairments may result from assets adversely impacted by the effects of climate change and/or additional liabilities may need to be recorded to account for regulatory fines and penalties resulting from enhanced regulatory standards. Additionally, cash flows from operations, net income, and access to capital could all be impacted by the effects of climate-related risks (and opportunities). Therefore, financial executives (e.g., chief financial officers, chief accounting officers, and controllers) should be involved in the organization's evaluation of climate-related risks and opportunities and the efforts undertaken to manage the risks and maximize the opportunities. Finally, careful consideration should be given to the linkage between scenario analyses performed to assess the resilience of an organization's strategy to climate-related risks and opportunities (as suggested in the Task Force's recommendations) and assumptions underlying cash flow analyses used to assess asset (e.g., goodwill, intangibles, and fixed assets) impairments.

8. Time Frames for Short, Medium, and Long Term

As part of the Task Force's second public consultation, some organizations asked the Task Force to define specific ranges for short, medium, and long term. Because the timing of climate-related impacts on organizations will vary, the Task Force believes specifying time frames across sectors for short, medium, and long term could hinder organizations' consideration of climate-related risks and opportunities specific to their businesses. The Task Force is, therefore, not defining time frames and encourages preparers to decide how to define their own time frames according to the life of their assets, the profile of the climate-related risks they face, and the sectors and geographies in which they operate.

In assessing climate-related issues, organizations should be sensitive to the time frames used to conduct their assessments. While many organizations conduct operational and financial planning over a 1-2 year time frame and strategic and capital planning over a 2-5 year time frame, climate-related risks may have implications for an organization over a longer period. It is, therefore, important for organizations to consider the appropriate time frames when assessing climate-related risks.

9. Scope of Coverage

To promote more informed investing, lending, and insurance underwriting decisions, the Task Force recommends all financial and non-financial organizations with public debt and/or equity adopt its recommendations.[58] Because climate-related risks and opportunities are relevant for organizations across all sectors, the Task Force encourages all organizations to adopt these recommendations. In addition, the Task Force believes that asset managers and asset owners, including public- and private-sector pension plans, endowments, and foundations, should implement its recommendations. The Task Force believes climate-related financial information should be provided to asset managers' clients and asset owners' beneficiaries so that they may better understand the performance of their assets, consider the risks of their investments, and make more informed investment choices.

Consistent with existing global stewardship frameworks, asset owners should engage with the organizations in which they invest to encourage adoption of these recommendations. They should also ask their asset managers to adopt these recommendations. Asset owners' expectations in relation to climate-related risk reporting from organizations and asset managers are likely to evolve as data availability and quality improves, understanding of climate-related risk increases, and risk measurement methodologies are further developed.

The Task Force recognizes that several asset owners expressed concern about being identified as the potential "policing body" charged with ensuring adoption of the Task Force's recommendations by asset managers and underlying organizations. The Task Force appreciates that expectations must be reasonable and that asset owners have many competing priorities, but

[58] Thresholds for climate-related financial disclosures should be aligned to the financial disclosure requirements more broadly in the jurisdictions where a preparer is incorporated and/or operates and is required to make financial disclosures.

encourages them to help drive adoption of the recommendations. Because asset owners and asset managers sit at the top of the investment chain, they have an important role to play in influencing the organizations in which they invest to provide better climate-related financial disclosures.

10. Organizational Ownership

Some organizations have not formalized responsibility for climate-related risk assessment and management. Even for organizations with clearly assigned responsibilities for climate-related issues, the relationship between those responsible for climate-related risk (e.g., "environmental, social and governance" experts, chief investment officers) and those in the finance function can range from regularly scheduled interactions and exchanges of information to minimal or no interaction. According to some preparers, lack of clarity around responsibility for climate-related risk assessments and management, compounded by a lack of integration into organizations' financial reporting processes, could adversely affect implementation of the recommendations.

The Task Force believes that by encouraging disclosure of climate-related financial information in public financial filings, coordination between organizations' climate-related risk experts and the finance function will improve. Similar to the way organizations are evolving to include cyber security issues in their strategic and financial planning efforts, so too should they evolve for climate-related issues.