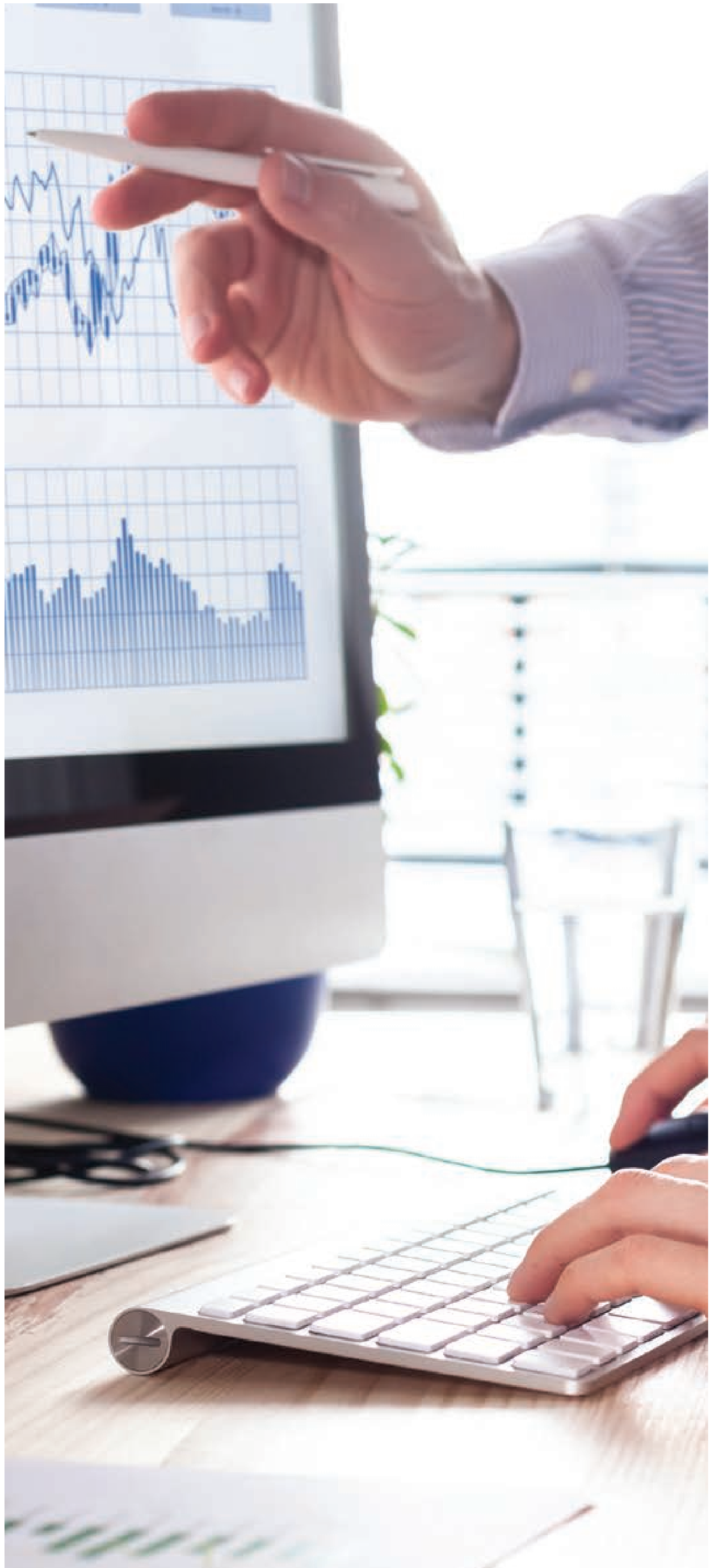
Application of Climate-related Financial Disclosure (TCFD) Recommendations

January 2018



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Significance of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and potential impact for your organization

A historic shift in the guidelines for mainstream financial reporting is currently underway, driven by the need for more effective climate-related disclosures. This shift has been driven primarily by the financial community, which is increasingly requesting information on climate-related risks and opportunities to support effective decision-making. Investors, lenders and insurers, for example, are increasingly interested in consistent data to "promote more informed investment, credit and insurance underwriting decisions." While organizations across a variety of industries may perceive an increased reporting burden, the additional effort may be offset by multiple benefits, including:

- increased understanding of climate-related risks and opportunities;
- more robust risk management processes and informed strategic planning; and
- improved access to capital via increased investor confidence in risk assessment/mitigation processes.

The TCFD recommended disclosures, while voluntary, are being considered by several national governments for varying levels of endorsement and regulation. A letter from 390 global investors was submitted to governments of the G20 nations on July 3, 2017, recommending that they continue to support and implement the Paris Agreement, drive investment in the low-carbon transition, and support the TCFD recommendations.[1] Potentially more pressing than regulatory change is the issue of the financial impacts on investment assets due to climate change-related risks. The potential scale of risk to assets is generating growing global investor concern and driving demands that climate change risks be assessed and disclosed in a measurable and consistent way. Increasingly, some of the largest investment houses in the world – including Vanguard, Blackrock and State Street – are setting policies to support shareholder demands for greater transparency. This is happening ahead of mandatory reporting requirements being implemented by regulatory bodies, highlighting how actions to address climate change are evolving to be driven by investor and client interest. The TCFD disclosure recommendations are intended to be:

- adoptable by all organizations;
- included in mainstream annual financial filings;
- designed to solicit decision-useful, forward-looking information on financial impacts; and
- focused on risks and opportunities related to transition to a lower-carbon economy. [2]

Development of the TCFD recommendations

Following the 2007-2008 financial crisis, the G20 established the Financial Stability Board (FSB) to identify and mitigate threats to the global financial system. Based on the belief that climate change represented a systemic threat, in 2015 the FSB created the Task Force on Climate-related Financial Disclosures (TCFD). Led by Michael Bloomberg, former Mayor of New York City, the Task Force included members from global banking institutions, insurance companies, institutional investors, industrial and consumer products companies and experts on financial accounting and public disclosure.

The TCFD published draft recommendations in December 2016 to help businesses disclose climate-related financial risks and opportunities within the context of their existing disclosure requirements. After receiving feedback on the draft recommendations from more than 300 companies in 30 countries across financial and non-financial sectors, the TCFD issued its final report in June 2017. This report was presented July 7-8, 2017 to the G20 in Italy. Implementation of the recommendations will occur at the country level and will likely range from soft guidance to regulatory requirements.

Growing relevance of the TCFD recommendations

2017 was a historic turning point for the management and disclosure of financial risks associated with climate change. The year saw the following significant developments:

- In January, four of the top 10 global risks reported in the World Economic Forum Annual Global Risks Report related to climate change ("extreme weather events", "man-made environmental disasters", "natural disasters" and "a failure of climate change mitigation and adaptation").
- In February, the Australian Prudential Regulation Authority (APRA) made it clear that all APRA-regulated entities must recognize that climate change has evolved from a "non-financial" issue to one that presents foreseeable and material financial risks.
- In March, the world's largest investor, BlackRock (with assets under management of US$5.1 trillion), issued its 2017-2018 Engagement Priorities, including climate risk disclosure in accordance with the draft TCFD recommendations.
- This was followed by specific guidance on BlackRock's intended engagement with investee companies on climate risk, including a clear warning that it will vote against management – and the re-election of directors – if they fail to constructively engage with this issue.

[1] Letter from Global Investors to Governments of the G20 Nations. July 3, 2017.
Online at: http://investorsonclimatechange.org/wp-content/uploads/2017/05/v2-Final-Letter-to-G20.pdf

[2] Recommendations of the Task Force on Climate-related Financial Disclosure, page iii, Figure 1.

— National governments have been exploring, debating and recommending further actions. For example, in April, the Australian Senate issued its report of the Inquiry into Carbon Risk Disclosure in Australia. The report included strong recommendations that both the Australian Securities & Investments Commission and Australian Stock Exchange provide further guidance to corporations and their directors on the disclosure of the financial risks associated with climate change.

— In May, the majority of shareholders in the world's largest listed energy corporation, ExxonMobil – including BlackRock and the Vanguard Group – voted against management and supported a resolution requiring the company to assess and disclose the risk to its financial performance and prospects associated with climate change (for example, see the Proxy Vote Bulletin issued by BlackRock). The Vanguard Group's vote was particularly unexpected. As the largest U.S. mutual fund firm with $4 trillion in assets, Vanguard had typically voted in alignment with management and did not have a record of supporting shareholder proposals on climate change.

— In June, the Bank of England Prudential Regulation Authority released a document entitled "The Bank of England Response to Climate Change".

— In July, 11 banks representing $7 trillion in assets formed a pilot group to develop analytical tools and frameworks for implementing the TCFD recommendations. As of Oct. 31, 2017 this group had grown to 16 banks.[3]

Figure 1: The year in climate-related financial disclosure around the world

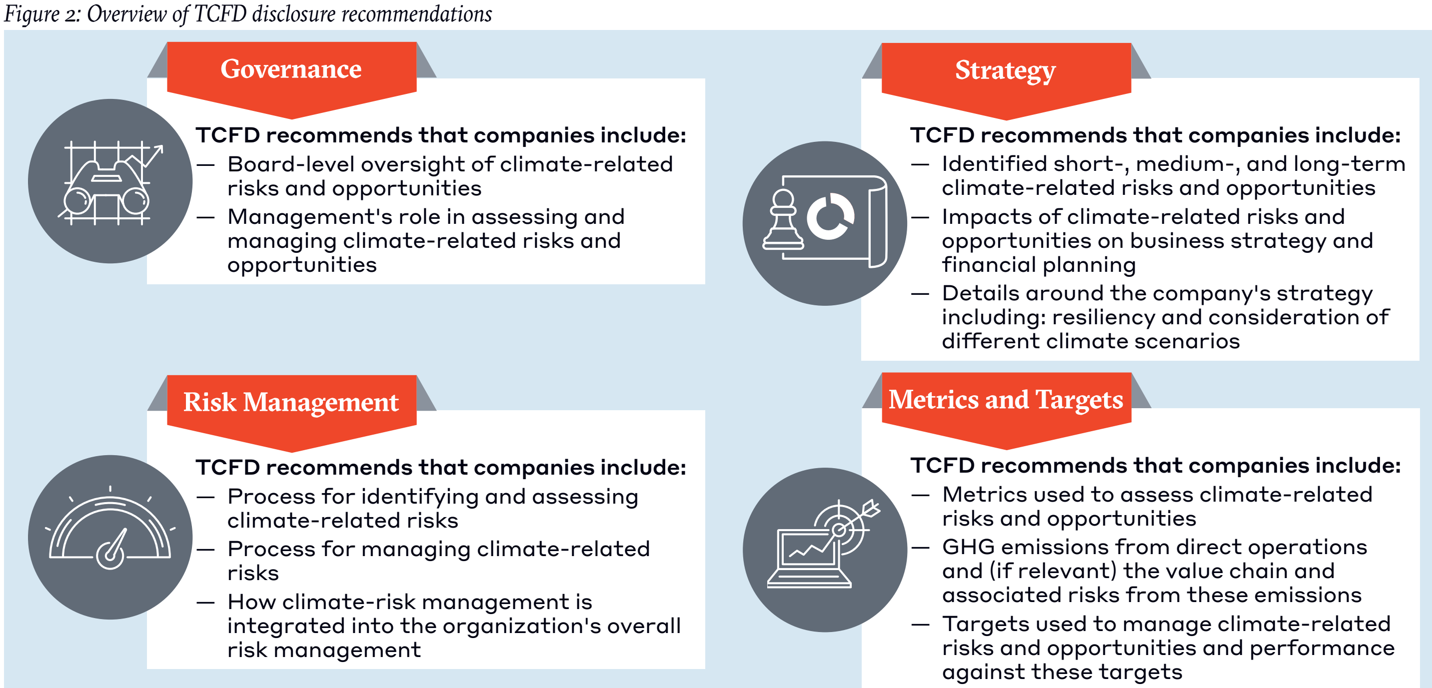
[3] UNEP Finance Initiative. 14 UNEP FI member banks representing over $7 trillion are first in industry to jointly pilot the TCFD recommendations. Sept. 26, 2017. Online at: http://www.unepfi.org/news/industries/banking/eleven-unep-fi-member-banks-representing-over-7-trillion-are-first-in-industry-to-jointly-pilot-the-tcfd-recommendations/

- In August, the law firm, Environmental Justice Australia, filed a lawsuit against the Commonwealth Bank of Australia (CBA) claiming that it failed to meet reporting standards regarding climate change risks in its 2016 annual report.[4] Less than a week after the suit was filed, CBA issued a statement reaffirming its commitment to address climate change and pledging to adopt the TCFD recommendations.[5]
- In September 2017, 10 companies had committed to implementing the TCFD recommendations through the Climate Disclosure Standards Board (CDSB), including global retailer Marks & Spencer and Philips Lighting.[6] Early signatories represent a broad range of sectors: Financials, Energy, Industrials, Communications, Technology and Consumer Discretionary.
- In October, 30 financial institutions and pension funds representing over $1 trillion in assets issued a joint Declaration of Institutional Investors on Climate-Related Financial Risks, calling on publicly traded companies in Canada to improve disclosure on their disclosure to climate change risks.
- In November, TCFD hosted a conference with the Bank of England to educate organizations on scenario analysis; TCFD was highlighted at the 23rd Conference of the Parties (COP23) in Bonn, Germany.
- In December, CDP released the 2018 Climate Change questionnaire, which has been modified to directly align with the TCFD recommendations.

Core recommendations of the TCFD guidelines

The TCFD guidance is ultimately focused on one overarching objective, that financial institutions include climate risk disclosure in their corporate financial reporting, subject to review by the chief financial officer and audit committee as well as the controls such disclosures require. The same consequence that motivates this goal – to raise the stakes of climate-related risk disclosure – generated angst and resistance among those companies expected to implement the guidelines. Thus, between the issuance of draft guidelines in December 2016 and the final guidance in June 2017, the TCFD moved to provide for a more gradual transition by allowing companies already disclosing climate risk in non-financial reporting to continue to do so, while applying TCFD guidance. There is particular flexibility around disclosure of more uncertain elements, such as scenario analysis, if a company is already reporting through a third-party (e.g., CDP). There is also the strong suggestion that any firm with an annual revenue in excess of $1 billion should follow a similar path. The TCFD notes that firms are already obligated to disclose any material risks related to climate change and seeks to provide guidance that enhances the usability and cross-company comparability of such data. While reporting material risks in SEC filings is a legal requirement, doing so via voluntary frameworks such as CDP remains at the discretion of the firm. If you disclose a material risk, via a voluntary framework, be sure to include

Figure 2: Overview of TCFD disclosure recommendations



[4] Notice of Filing. VID879/2017: Guy Abrahams v Commonwealth Bank of Australia. Aug. 8, 2017. Online at: https://www.envirojustice.org.au/sites/default/files/files/170807%20Concise%20Statement%20(as%20filed).pdf

[5] Commonwealth Bank of Australia. Reaffirming our commitment to addressing climate change. Aug. 14, 2017. Online at: https://www.commbank.com.au/guidance/newsroom/our-climate-commitment-201708.html

[6] Messenger, Simon. How to prepare your business for the TCFD recommendations. Climate Disclosure Standards Board. Sept. 27, 2017. Online at: https://www.aktuellhallbarhet.se/wp-content/uploads/2017/09/6.-simon-messenger-new.pdf

it in your SEC reporting. Reporting of non-material risks to the SEC is not required and is generally discouraged as it may unduly crowd out required disclosures. These risks should be reported via voluntary frameworks using TCFD guidance.

The TCFD also recommends 11 specific disclosures divided into four thematic areas – governance, strategy, risk management and metrics and targets. See Figure 2 for an overview of the disclosures.

RISK SCENARIO PLANNING

One element that will likely be new for most companies and may require a significant amount of effort is conducting analyses covering differing emissions and climate scenarios to determine risks and opportunities. The TCFD places risk into two distinct buckets, transition risk and physical risks. Transition risk captures the potentially extensive policy, legal, technology and market changes that will be necessary to address climate change mitigation and adaptation requirements at a specific global temperature change threshold. Physical risks may have financial implications from direct damage to a company's physical assets as well as its customers' assets and supply chains.

TRANSITION RISK

Transition risks refer to the policy, technology, market and reputation risks resulting from responses to a changing climate. For example, increasing concern and awareness around climate change could drive investments in the renewable energy market. A rise in renewable energy development could reduce demand for carbon-intensive energy and subsequently sector revenues.

TCFD recommends organizations apply a 2° Celsius (C) scenario for transition risk because it "provides a common reference point and aligns with the objectives of the Paris Agreement," in addition to applying two or three other climate-related scenarios. The most likely alternative scenario is business-as-usual, in which case transition risk will be limited but the physical risks from climate change will grow and need to be considered more carefully. At this juncture there are at least six widely recognized, publicly available 2° C scenarios – IEA 2DS, IEA 450, DDPP and IRENA, Greenpeace Advanced Energy [R]evolution, and the IPCC's RCP 2.6. The TCFD suggests that when an organization is developing its own scenario, it relies on publicly available scenarios that are: 1) used, referenced and issued by an independent body; 2) supported by publicly available data sets; 3) updated on a regular basis; and 4) linked to functional tools. The following four scenario packages meet those criteria:

— IEA 2DS – Tracks necessary improvement in clean energy technology deployment consistent with at least a 50% chance of limiting the average global temperature increase to 2°C.

— IEA 450 - Sets out a pathway for energy markets and fuel mix consistent with the goal of limiting the global increase in temperature to 2°C by limiting concentration of greenhouse gases in the atmosphere to around 450 parts per million of CO_2.

— DDPP – The Deep Decarbonization Pathways Project lays out a technology and policy path that is necessary to limit the average global temperature increase to 2°C.

— IRENA – Envisions a scenario where the deployment of renewable energy and energy efficiency globally can achieve the emissions reductions needed to prevent global temperature from rising more than 2°C while permitting the global economy to grow.

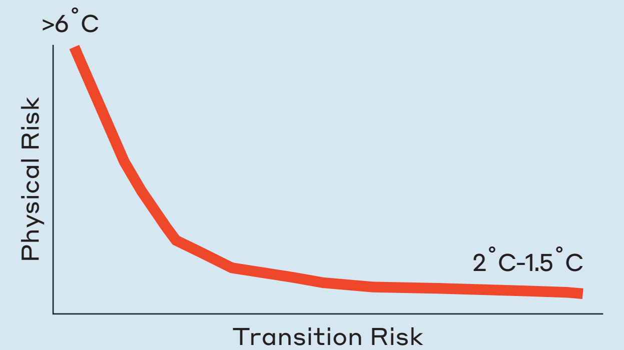
There are several scenarios for a greater than 2°C increase in global temperatures including the IEA Bridge scenario which keeps the world on track for a 2°C increase through 2025 but then requires additional measures, the IEA's INDC Paris Agreement, which would limit the increase to 2.6 °C based on the Paris Climate Change Accords, the IEA WEO New Policies Scenario, resulting in a 4°C increase, and the IEA WEO current Policies Scenario, which yields a 6°C increase in global temperatures. However, there are no publicly available scenarios that result in a less than 2°C rise in global temperatures.

These scenarios provide key input parameters such as GDP growth, population growth, price on carbon, energy efficiency, fossil fuel mix, and renewable energy penetration that can be combined with your own existing long-run business planning and sensitivity analysis to provide forecasts of risks and opportunities for your business. However, even companies that have extensive experience with scenario analysis may face a significant learning curve when using these scenarios. Typically, when conducting scenario analysis, a firm may look out two, three or maybe five years into the future, where climate scenarios may stretch 25-40 years into the future. Further, corporate scenarios may have much different sets of key independent variables (drivers) than those used in the scenarios listed above. The TCFD goes on to say, "For an organization at the initial stages of implementing scenario analysis…the Task Force recommends disclosing how resilient, qualitatively or directionally, the organization's strategy and financial plans may be to a range of relevant climate change scenarios."

PHYSICAL RISK

Physical risks refer to the potential financial impacts from acute weather events, such as increased severity of storm events; and chronic weather events, including rising average temperatures and rising sea levels. It is recommended that organizations more significantly affected by physical risk, such as those in agriculture, transportation and infrastructure, insurance and tourism, consider a more in-depth application of scenario analysis. Businesses largely dependent on data centers, with significant needs for uninterrupted electricity and cooling, may also be considered at high risk from the physical impacts of climate change.

Figure 3: The Inevitable Trade-off between Physical and Transition Risk



Source: Task Force on Climate-related Financial Disclosure, Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate Related Risks and Opportunities, p. 13, June 2017, https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Technical-Supplement-062917.pdf

According to the TCFD, “physical risk scenarios generally identify extreme weather threats of moderate or higher risk before 2030 and a larger number and range of physical threats between 2030 and 2050.” Of course, there is a natural tradeoff between transition risks and physical risks. As emissions are further constrained and impacts diminish, physical risk is limited. However, in business as usual scenarios, transition risks will be minimized but much higher global temperatures will likely increase the threat of physical risk. Ultimately, you will want to align your transition risk and physical risk scenarios. However, at this time only the IPCC’s Representative Concentration Pathway 2.6, aligns with the 2°C transition risk scenario and the highest emitting IPCC scenario, available for a physical risk assessment, RCP 8.5 might not capture the worst case temperature rise, under a business-as-usual case.

Alignment of the TCFD recommendations with existing reporting frameworks

The TCFD recommendations, for all intents and purposes, are an amalgamation of recommendations and risk mitigation actions sourced from other influential disclosure frameworks. These recommendations are presented in four thematic areas that allow companies to respond to stakeholder needs for information about the risks and opportunities presented by climate change. They focus on four core operational elements: governance, strategy, risk management, and metrics and targets. In the annex of the final recommendations, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, pp. 18-20, TCFD maps recommended disclosures to other frameworks, including:

- OECD Principles of Corporate Governance;
- CDP Climate Change Questionnaire;
- Global Reporting Initiative (GRI);
- Carbon Disclosure Standards Board (CDSB); and
- International Integrated Reporting Council (IIRC).

If you are disclosing climate risks through one of the platforms discussed above, you have likely complied with at least some, if not a significant part, of TCFD guidance, and you can expect further alignment between these frameworks and the TCFD guidance in the near future. In recognition of the breadth of climate change reporting already occurring, TCFD allows for organizations using existing disclosure frameworks to apply the TCFD guidance within that framework as they become accustomed to the more rigorous reporting requirements. See Figure 4 for alignment with existing reporting frameworks.

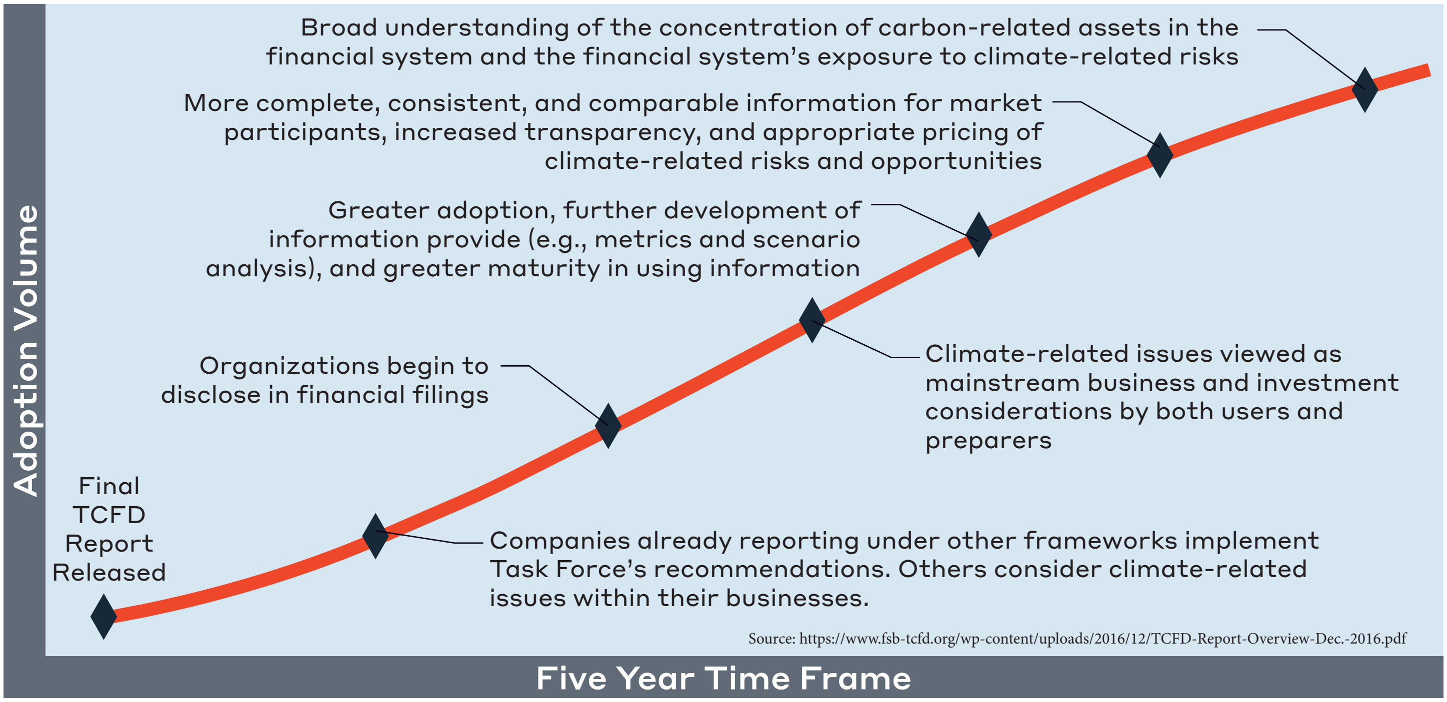
Suggested timeline for TCFD implementation

The TCFD recognizes that some companies may be more capable of adopting and implementing the recommendations sooner than others so, while there is no specific timeline for implementation, the TCFD would like to see companies take action as soon as possible. For example, companies already reporting and disclosing information under other frameworks (e.g., CDP) may be in a better position to implement the Task Force’s recommendations within the year.

Figure 4: Alignment with Existing Reporting Frameworks

	Recommended Disclosures										
	Governance		Strategy			Risk Management			Metrics and Targets		
	a)	b)	a)	b)	c)	a)	b)	c)	a)	b)	c)
CDP Climate Change Questionnaire	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CDSB Climate Change Reporting Framework	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CDSB Framework for Reporting Environmental Information and Natural Capital	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
GRI 102: General Disclosures	✓	✓	✓				✓		✓	✓	
G20/OECD Principles of Corporate Governance	✓		✓	✓		✓	✓	✓	✓		
International Integrated Reporting Framework	✓		✓	✓			✓	✓	✓		✓
GRI 201: Economic Performance				✓						✓	

Figure 5: Illustrative TCFD implementation path



The TCFD anticipates that reporting will evolve over time as expectations rise and quality and consistency in reporting become priorities. See Figure 5 above for TCFD's Illustrative Implementation Path. As of 2017, CDP's Climate Change questionnaire contained an unscored question on scenario analysis. The 2018 CDP Climate Change questionnaire has new and amended questions designed to support disclosure in-line with the TCFD recommendations. As of the writing of this paper, CDP's scoring methodology has not yet been finalized. It would not be surprising to see CDP assign points to some of these questions. If a company were to begin evaluating scenarios and disclose this information via CDP in 2018, it would be aligned with TCFD's suggested implementation timeline. The TCFD suggests organizations begin to disclose information in financial filings by this time in 2019. Given the newness of the scenario analysis and the greater controls placed on financial disclosure, the TCFD recognizes that initial climate change disclosures in financial filings may be qualitative rather than quantitative. The TCFD has indicated that the initial financial disclosures should include governance and risk management, while results of scenario analysis and performance metrics may be temporarily delayed. Even in the case of governance and risk, disclosures may be achieved through other non-financial reporting channels, such as CDP.

Next steps for implementing the TCFD recommendations

The TCFD guidance represents the next stage in best practice for the disclosure of climate-related risk. The ultimate aim of the TCFD is to move climate-related risk into financial disclosures with the associated level of controls and responsibilities. However, such reporting raises the stakes of disclosure significantly and should be approached cautiously and methodically. Meanwhile, companies should begin to employ the techniques recommended by TCFD to evaluate and characterize both transition risk and physical risk to enhance the credibility of their disclosures and make them more useful for investors and other stakeholders. As we gain more experience with these techniques and confidence in their application grows, disclosures can be moved to financial reports. A suggested step-by-step process for incorporating climate change risks and opportunities into financial disclosures is included below:

STEP 1: Identify the risks and opportunities. To comply with the TCFD recommendations, organizations must understand both the transition risk and the physical risks from the impacts of climate change to which they are exposed. This includes a review of what is going to change and what elements of your organization are sensitive to those changes. Impact scenarios should consider four major categories of financial impact: revenues, expenditures, assets and liabilities, and capital and financing. For physical risk, companies may wish to begin with business-as-usual emissions (largely represented by the Intergovernmental Panel on Climate Change's (IPCC), Representative Concentration Pathway (RCP) 8.5. For transition risk, assuming global action on climate, TCFD recommends conducting analysis of several scenarios to cover a variety of future outcomes (i.e. looking at scenarios from business as usual to a 2° Celsius (C) scenario). Such a scenario would reduce the physical impacts on your business, likely generating less risk than the business-as-usual scenario.

STEP 2: Understand how your current business processes consider climate risk. Many organizations have designated teams to assess organizational risk. It is likely that climate and weather factors are included to some degree in your organization's existing risk assessment processes. Work with internal teams to understand how risk is currently managed within the organization and to what degree climate risks are assessed. Familiarity with current processes is the first step to meeting the TCFD recommendations. Key questions to ask and understand about your organization include:

- How are risk categories selected for inclusion in the current risk management system?
- Who manages the risk assessment and who implements risk management?
- Are climate impacts and extreme weather events included in current risk assessments?
- Are there Environmental Management Plans (EMPs) for facilities? If so, are they compliant with existing frameworks, such as ISO 14001?

STEP 3: Develop a strategy to embed and manage climate change risk. Understand how risks are addressed within your organization and who manages them. Work with current risk assessors and managers as well as senior management to ensure that all levels of the organization are involved in developing and embedding a risk management strategy. Be sensitive to existing management and structure around climate change risk, using the TCFD recommendations as a conversation starter for improving and expanding upon existing management. If your organization has EMPs, be sure to understand how these address climate change risks. Consider what information will be needed to track performance of a risk management strategy when developing the strategy.

STEP 4: Develop suitable metrics to measure performance. Metrics should be tracked through several key performance indicators (KPIs) to allow for continued assessment of strategy performance. You may already be collecting useful data; for example, many organizations calculate GHG emissions. It is not yet standard practice for organizations to collect data on the physical risks of climate change, but this can be a KPI for many strategies. Depending on the risks your organization faces, you may need to establish new KPIs to suit your needs (e.g., lost revenue due to flooding). Identify and work with people who will be responsible for collecting data around KPIs to ensure that the data you are requesting is reasonable and there are consistent systems for data collection.

STEP 5: Report. Include identified risks from climate change and indicate management strategies in financial reports (e.g., 10-K annual reports in the United States). Softer and more detailed aspects of financial risk assessment, such as scenario analysis and detailed descriptions of management, can be disclosed through other reporting frameworks (e.g., CDP Climate Change questionnaire).

STEP 6: Update and improve (iterative). The challenge of assessing and addressing risks from climate change will not be easily resolved for most organizations. The improvement process will require sustained long-term effort. Any strategy that you develop should be revisited to understand where it is effective and where improvements should be made.

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To learn more about how the TCFD recommendations have influenced the 2018 CDP Climate Change questionnaire, please see our recent blog posting, 2018 CDP Climate Change Questionnaire: Influence of The TCFD And Other Key Changes. We will also be posting the whitepaper, Making the Most of CDP 2018, that will coincide with the release of the scoring methodology in March 2018.

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