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Climate Change Emerges as a Risk for Financial Institutions

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In its 2016 report on global risks, the World Economic Forum identified the failure to mitigate and adapt to climate change as "the most impactful risk for the years to come."[1] Yet there is minimal public information on the risk that climate change poses to companies, including financial institutions. That may soon change, though, as a new report details a series of disclosure practices designed to provide investors, lenders, and other stakeholders a fuller picture of the climate-related risks confronting financial firms and other companies.

In a September 2015 speech, Mark Carney — governor of the Bank of England and chair of the Financial Stability Board — said: "The combination of the weight of scientific evidence and the dynamics of the financial system suggest that, in the fullness of time, climate change will threaten financial resilience and longer-term prosperity. While there is still time to act, the window of opportunity is finite and shrinking."[2] Shortly after, in December 2015, the FSB established the industry-led Task Force on Climate-related Financial Disclosures (or TCFD) in response to concerns of the G-20 Finance Ministers and Central Bank Governors about potential financial shocks and sudden losses in asset values associated with the transition to a lower-carbon economy. The FSB asked the Task Force to develop voluntary climate-related disclosures that "could promote more informed investment, credit, and insurance underwriting decisions" and, in turn, "would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks."[3] In March 2016, the TCFD released its phase-one report, outlining the group's objectives and initial considerations.[4]

In December 2016, the Task Force released its second report, which seeks public consultation on its recommendations for climate-related financial disclosures. While the recommended disclosures are voluntary, they will likely become best practice. In addition, given the focus on the financial sector's exposure to climate-related risks, financial institutions should ensure they understand the implications for their internal reporting as well as external reporting.

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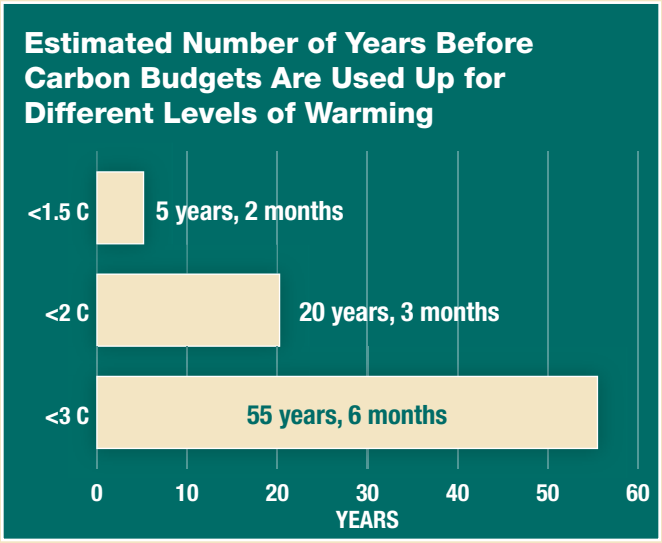
1 "The Global Risks Report 2016," World Economic Forum: http://www3.weforum.org/docs/Media/TheGlobalRisksReport2016.pdf.
2 "Breaking the tragedy of the horizon — climate change and financial stability," Mark Carney (Sept. 29, 2015): http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx.
3 "Proposal for a Disclosure Task Force on Climate-Related Risks," Financial Stability Board (Nov. 9, 2015): www.fsb.org/wp-content/uploads/Disclosure-task-force-on-climate-related-risks.pdf.
4 "Phase I Report of the Task Force on Climate-Related Financial Disclosures," Task Force on Climate-related Financial Disclosures (March 31, 2016): https://www.fsb-tcfd.org/wp-content/uploads/2016/03/Phase_I_Report_v15.pdf.

Climate Change In Context

There is broad consensus in the scientific community that greenhouse-gas emissions generated by human activity are the primary cause of a sustained rise in global temperatures.[5] The continued emission of greenhouse gases — and in particular carbon dioxide — will cause further warming of the planet, and warming above 2 degrees Celsius will increase "the likelihood of severe, pervasive and irreversible impacts for people and ecosystems."[6] According to the Intergovernmental Panel on Climate Change, keeping the global average temperature increase to below 2 degrees Celsius "will require an urgent and fundamental departure from business as usual. Moreover, the longer we wait to take action, the more it will costand the greater the technological, economic, social and institutional challenges we will face."[7]

Recognizing the need for action, 197 governments in December 2015 reached the so-called Paris Agreement, in which they committed to "[hold] the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels."[8] In its most recent synthesis report, the IPCC provided estimates of the amount of carbon dioxide that can be emitted while keeping the global average temperature increase to no more than 1.5 C, 2 C, or 3 C above pre-industrial levels. As shown in Figure 1, if emissions continue at current rates, then the "carbon budget" (the maximum amount of CO2 that can be released into the atmosphere while keeping a reasonable chance of staying below a given temperature rise) for a global temperature rise of less than 1.5 C will be used up in just over five years.[9] Keeping the global average temperature increase below 1.5 C to 2 C requires that the level of greenhouse gases, especially CO2, stay below a critical limit, which implies substantial and immediate changes in countries' use of energy derived from fossil fuels.[10] The shift away from fossil fuels is often referred to as the transition to a lower-carbon economy.



[5] "Quantifying the consensus on anthropogenic global warming in the scientific literature," Environmental Research Letters, John Cook, Dana Nuccitelli, Sarah A. Green, Mark Richardson, Bärbel Winkler, Rob Painting, Robert Way, Peter Jacobs, and Andrew Skuce (May 2013).

[2] "Fifth Assessment Report," Intergovernmental Panel on Climate Change (2014): http://www.ipcc.ch/report/ar5.

[7] Ibid.

[8] "Paris Agreement," Parties to the United Nations Framework Convention on Climate Change (December 2015): http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf.

[9] Figures assume a 66% probability of staying below the given temperature. See https://www.carbonbrief.org/analysis-only-five-years-left-before-one-point-five-c-budget-is-blown for more information.

[10] Emissions of carbon dioxide from fossil-fuel combustion and industrial processes contributed about 78% of the total increase in greenhouse-gas emissions from 1970 to 2010, with a similar percentage contribution accounting for the increase during the period from 2000 to 2010. See http://www.ipcc.ch/report/ar5.

Need for Climate-Related Financial Disclosures

In creating the Task Force, the FSB was responding to existing challenges regarding climate-related disclosures:

- Public companies have an obligation under existing securities law to disclose material risks, including those related to climate change, but lack a consistent and coherent framework to do so.
- Lenders, insurance underwriters, and investors need climate-related risk information to make informed capital-allocation and financial decisions, but information on the actual or potential financial impact of climate change on a company is limited.
- Regulators need to understand risks that may be building in the financial system, but existing reporting by financial institutions is inconsistent.

As highlighted in the Task Force's report, there is a growing demand for clear, reliable, decision-useful, climate-related information by a range of participants in the financial markets.[11] In addition, the report notes the "increased demand for transparency from organizations on their risks and risk management practices, including those related to climate change." While there are several disclosure frameworks that address climate-related issues, most of them focus on disclosures that describe the company's impact on the climate (e.g., greenhouse-gas emissions) rather than the impact of climate change on the company. To promote better economic decision-making, the Task Force's recommended disclosures focus on the impact climate change has or may have on a company's strategy and financial performance.

CLIMATE-RELATED RISKS AND OPPORTUNITIES

The physical threats posed by climate change have been studied and discussed for decades, and yet the Task Force notes that the "understanding of the potential financial risks posed by climate change — to companies, investors, and the financial system as a whole — is still at an early stage."[12] Many companies view climate change as a long-term issue that does not affect current decisions related to strategy or capital allocation — a view perhaps encouraged by models that plot out severe physical effects of climate change to 2050 or beyond.

However, the financial implications of climate change are not only related to longer-term physical impacts. Companies also confront near-term strategic and financial implications stemming from the transition to a lower-carbon economy. For example, multinational agreements, regulatory actions, technological advances, and shifting consumer preferences have affected the strategies and financial performance of some companies, and further actions and developments could require further evolution beyond today's business as usual.

The Task Force's report provides additional information on the risks and financial impacts associated with the transition to a lower-carbon economy (transition risks) and physical threats from climate change (physical risks), as described in Figure 1.

"While there are several disclosure frameworks that address climate-related issues, most of them focus on disclosures that describe the company's impact on the climate (e.g., greenhouse-gas emissions) rather than the impact of climate change on the company."

[11] "Investors Demand Climate Risk Disclosure," Avery Fellow, Bloomberg BNA (Feb. 25, 2013): www.bloomberg.com/news/2013-02-25/investors-demand-climate-risk-disclosure-in-2013-proxies.html.

[12] "Recommendations of the Task Force on Climate-related Financial Disclosures," Task Force on Climate-related Financial Disclosures (Dec. 14, 2016), Page 2: https://www.fsb-tcfd.org/publication/recommendations-report/.

FIGURE 1

Examples of Climate-Related Risks and Potential Financial Impacts[13]

Type	Climate-Related Risks	Potential Financial Impacts
Transition Risks	**POLICY AND LEGAL**	
	• Increased pricing of greenhouse-gas emissions • Enhanced emissions-reporting obligations • Mandates on and regulation of existing products and services • Exposure to litigation	• Increased operating costs (e.g., compliance costs) • Write-offs and early retirement of existing assets due to policy change • Impaired assets • Increased insurance premiums • Fines and judgments
	TECHNOLOGY	
	• Substitution of existing products and services with lower-emission options • Unsuccessful investment in new technologies • Upfront costs to transition to lower-emission technology	• Write-offs and early retirement of existing assets • Reduced demand for products and services • Upfront research and development expenditures in new and alternative technologies • Upfront capital investments in technology development • Upfront costs to adopt/deploy new practices and processes
	MARKETS	
	• Changing customer behavior • Uncertainty in market signals • Increased cost of raw materials	• Reduced demand for goods and services due to shift in consumer preferences • Increased production costs due to changing input prices (e.g., energy and water) and output requirements (e.g., waste treatment) • Abrupt and unexpected shifts in energy costs • Changing revenue mix and sources • Repricing of assets and speed of repricing (e.g., fossil-fuel reserves, land valuations, and securities valuations)
	REPUTATION	
	• Shift in consumer preferences • Stigmatization of sector • Increased stakeholder concern or negative stakeholder feedback	• Reduced demand for goods/services • Reduction or disruption in production capacity (e.g., shutdowns, delayed planning approvals, and interruptions to supply chain) • Impacts on workforce management and planning (e.g., employee attraction and retention) • Reduction in capital availability
Physical Risks	**ACUTE**	
	• Increased severity of extreme weather events such as cyclones and floods	• Reduction or disruption in production capacity (e.g., shutdowns, transport difficulties, and supply-chain interruptions) • Impact on workforce management and planning (e.g., health, safety, and absenteeism) • Write-offs and early retirement of existing assets (e.g., damage to property and assets in high-risk locations) • Increased operating costs (e.g., inadequate water supply for hydroelectric plants or for cooling nuclear and fossil-fuel plants) • Increased capital costs (e.g., damage to facilities) • Reduced revenues from lower sales/output • Increased insurance premiums and potential for reduced availability of insurance on assets in high-risk locations
	CHRONIC	
	• Changes in precipitation patterns and extreme variability in weather patterns • Rising mean temperatures • Rising sea levels	

[13] Ibid., Page 10.

The Task Force's report also provides examples of how climate change can present financial opportunities, as firms may potentially benefit from higher resource efficiency (e.g., reduced operational costs), new energy sources (e.g., returns on low-emission technology), new products and services (e.g., increased access to and demand from new markets), and resilience (e.g., increased supply-chain reliability).

TCFD RECOMMENDATIONS

The Task Force developed four overarching recommendations on climate-related financial disclosures that apply to organizations across all sectors and jurisdictions. As described in Figure 2 below, the recommendations are structured around four thematic areas — governance, strategy, risk management, and metrics and targets — and supported by specific recommended disclosures. The recommended disclosures, which are intended to be included in financial filings, are designed to generate information useful to investors and other decision-makers regarding the risks for the reporting organization related to climate change and the transition to a lower-carbon economy.

FIGURE 2

TCFD Recommendations and Recommended Disclosures[14]

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	**Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.**	**Disclose how the organization identifies, assesses, and manages climate-related risks.**	**Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.**
Describe the board's oversight of climate-related risks and opportunities.	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Describe the organization's processes for identifying and assessing climate-related risks.	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
Describe management's role in assessing and managing climate-related risks and opportunities.	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Describe the organization's processes for managing climate-related risks.	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse-gas emissions, and the related risks.
	Describe the potential impact of different scenarios — including a 2-degrees-Celsius scenario — on the organization's businesses, strategy, and financial planning.	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

[14] Ibid., Page 16.

IMPLICATIONS FOR FINANCIAL INSTITUTIONS

As noted previously, a key element of the FSB's proposal for the Task Force was the development of voluntary climate-related disclosures that "would enable stakeholders to understand better **the concentrations of carbon-related assets in the financial sector** and **the financial system's exposures to climate-related risks**" (emphasis added). Given this focus on the financial sector's exposure to risks related to climate change, it is critical that financial institutions begin to explore their exposure to climate-related risks, if they are not doing so already, and assess how that exposure may change over time and under different conditions. The risks associated with climate change are complex and often difficult to quantify, which makes applying traditional risk management frameworks that prioritize risks based on their likelihood of occurrence and potential impact less useful.

Financial institutions should also ensure they understand the implications for their internal reporting as well as external reporting. In an annex to its report, the Task Force provides supplemental guidance on developing climate-related financial disclosures specific to entities in the financial sector, including banks, insurance companies, asset owners (e.g., pension funds), and asset managers.[15] Furthermore, the multifaceted nature of climate change will require financial institutions to bring together people from a variety of disciplines to understand and assess their climate-related risks.

On Dec. 14, the Task Force issued its report for a 60-day public consultation to gather feedback on the recommendations. The Task Force expects to issue its final report to the FSB in early summer, allowing the FSB to present the report at the G-20 summit in July 2017. Financial institutions should review the Task Force's report and supplemental guidance for the financial sector and provide input on disclosures that may very well become best practice.

[15] "Implementing the Recommendations of the Task Force on Climate-related Disclosures," Task Force on Climate-related Financial Disclosures (December 14, 2016): https://www.fsb-tcfd.org/publication/implementing-tcfd-recommendations/.

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