2019 Managing Climate-Related Risks and Opportunities

Update on TCFD

Executive Summary

TD is committed to giving our customers, communities and colleagues the confidence to thrive in a changing world. Readying ourselves and our stakeholders for the transition to the low-carbon economy is an important priority for the bank.

TD considers it our responsibility to address risks and opportunities, including those that are climate-related, as an integral part of our strategy and purpose. The Paris Agreement is a critical step in responding to the global threat of climate change, and TD affirms its alignment to the principle of the Agreement. We support Canada's objectives to meet the goals of the Paris Agreement and recognize our responsibility to contribute by integrating climate considerations across our business, with a focus on key areas of finance such as lending, investment, insurance and risk management, as well as our own operations.

In 2018, we were proud to release our inaugural report on the recommendations set forth by the Task Force on Climate-related Financial Disclosures (TCFD). In 2019, TD made notable progress toward addressing the recommendations, including the following key accomplishments:

Governance

- Held a dedicated educational session for the Board of Directors (the "Board") to foster informative dialogue, explore perspectives on assessing and managing climate risk and related investment strategies, and gain a better understanding of the current climate change risk landscape.
- Included environmental and social (E&S) risk oversight in TD's Operational Risk Oversight Committee (OROC) mandate.
- Established a TCFD Executive Steering Committee and Working Groups to systematically consider climate-related risks throughout our businesses.

Strategy

- Built our capacity to conduct scenario analysis by testing industry methodologies through participation in all United Nations Environment Programme Finance Initiative (UNEP FI) pilots, including publishing studies on physical risk methodologies and our climate risks in our asset management portfolios.
- Continued to make progress to meet our target of $100 billion, in total, toward initiatives in low-carbon lending, financing, asset management and internal corporate programs by 2030.

Risk Management

- Established a dedicated E&S Risk Management function that will work to enhance the frameworks and policies needed to actively manage climate-related risks.
- Formally integrated climate change into TD's enterprise risk management processes.
- Continued to assess climate-related risks and opportunities across our business segments, including lending, investment and insurance, and our operations.

Metrics and Targets

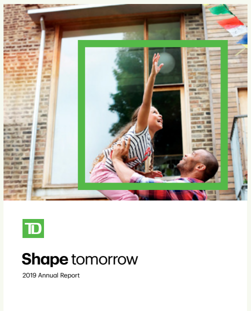
- Developed new metrics to evaluate and monitor our climate change management activities.

Going forward, we plan to continue to strengthen our internal policies to formalize how the bank accelerates and thrives in the transition to a low-carbon economy. We also plan to further develop our scenario analyses to stress-test the impact of climate-related risks and opportunities on our business strategies. We intend to continue developing appropriate metrics to support the monitoring and management of climate-related risks and opportunities.

This publication is part of our reporting suite.

FOR MORE INFORMATION ABOUT TD AND OUR ACTIVITIES, PLEASE READ OUR OTHER REPORTS:

2019 Annual Report



2019 Environmental, Social and Governance (ESG) Report

2019 TD Ready Commitment Report

2019 Principles for Sustainable Insurance (PSI) – Annual Disclosure

UN Principles for Responsible Investment (PRI) Transparency Report

1.0 Introduction

CLIMATE CHANGE OVERVIEW

Climate change is a global issue with far-reaching impacts across virtually all economic sectors. In 2018, a special report released by the Intergovernmental Panel on Climate Change (IPCC) highlighted that at its current rate, global warming is likely to reach 1.5°C by the middle of the century, resulting in a range of different climate-related risks.[1] For the second year in a row, the World Economic Forum's annual Global Risks Report[2] listed climate-related risks as among the most likely and impactful in 2020, underscoring the profound effect that climate-related risks are having on the global economy.

In Canada, campaigns leading up to the federal election in October 2019 saw climate change rise in prominence as voters demanded decisive action to address the climate crisis.[3] And several companies in the United States joined coalitions to publicly declare their support for the Paris Agreement.[4]

TD'S ROLE AND RESPONSIBILITIES

In December 2015, approximately 200 countries, including Canada, entered into the Paris Agreement, a global agreement focused on reducing worldwide greenhouse gas (GHG) emissions, preventing further impacts of climate change and supporting adaptive measures. The key target adopted by the signing countries is to keep the global average temperature rise this century to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.

The Paris Agreement is a critical step in responding to the global threat of climate change, and TD affirms its alignment to the principle of the Agreement. We support Canada's objectives to meet the goals of the Paris Agreement and recognize our responsibility to contribute by integrating climate considerations across our business, with a focus on key areas of finance such as lending, investment, insurance and risk management, as well as our own operations.

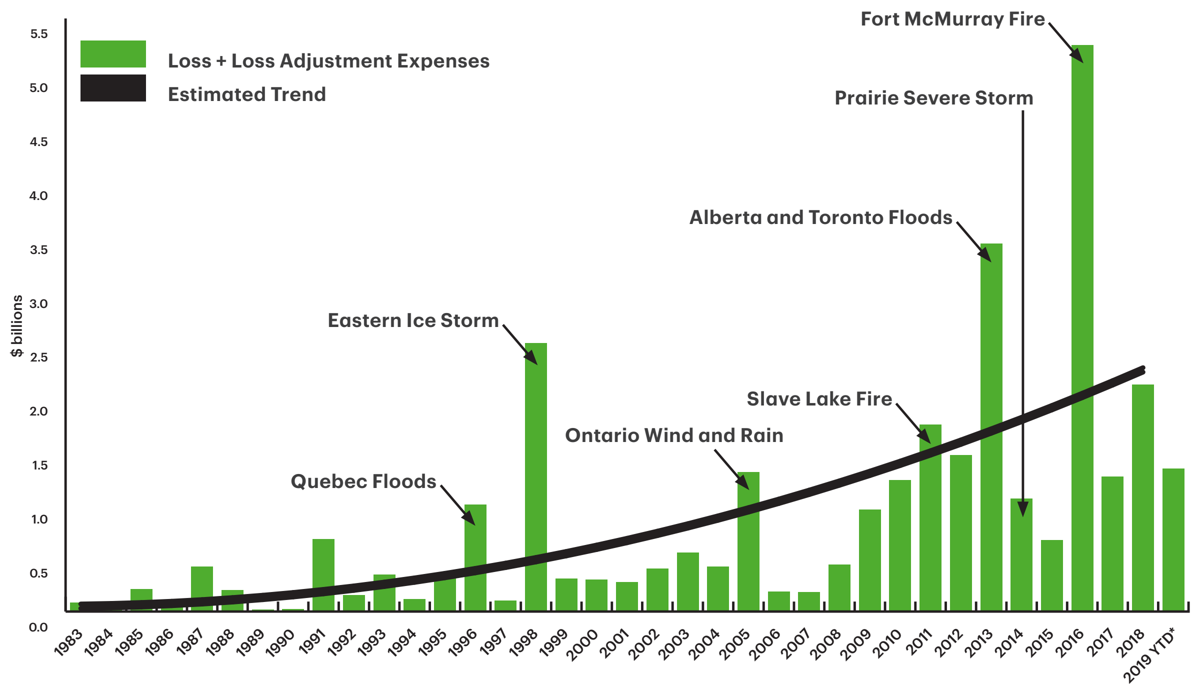
More recently, the Government of Canada's Expert Panel on Sustainable Finance released its final report, which called on the financial sector to leverage its strengths toward the challenges and opportunities posed by climate change.[5] This will require the mobilization of significant capital to fund new initiatives, which, in turn, creates an opportunity for innovative new financial products and investment strategies. As a large integrated financial institution, TD believes this presents strategic opportunities for business growth.

UNDERSTANDING CLIMATE CHANGE RISKS AND OPPORTUNITIES

The IPCC special report *Global Warming of 1.5°C* published in October 2018 highlighted that climate change has already had an impact on many industries and regions, and its impacts will continue to rise.[6] Historically, global economic costs from natural disasters have exceeded the 30-year average of US$140 billion per annum in seven of the last 10 years.[7] Beyond the environmental impacts of climate change, the social and economic impacts are also being felt across an increasing number of cities and communities.

1 IPCC (2018): *Global Warming of 1.5 ºC*; https://www.ipcc.ch/sr15/.
2 https://www.weforum.org/agenda/2020/01/what-s-missing-from-the-2020-global-risks-report/.
3 https://www.theglobeandmail.com/opinion/article-the-climate-change-election-is-over-what-happens-now/.
4 https://www.wri.org/blog/2019/10/trump-steps-away-paris-climate-agreement-us-states-cities-and-businesses-step-up.
5 http://publications.gc.ca/collections/collection_2019/eccc/En4-350-2-2019-eng.pdf.
6 https://www.ipcc.ch/sr15/.
7 https://natcatservice.munichre.com/overall/1?filter=eyJ5ZWFyRnJvbSI6MTk4MCwieWVhclRvIjoyMDE4fQ%253D%253D&type=1.

INSURED CATASTROPHIC LOSSES IN CANADA



* Updated December 2019.
Values in 2018 Canadian dollars.
Source: *IBC Facts Book* (http://assets.ibc.ca/Documents/Facts%20Book/Facts_Book/2019/IBC-2019-Facts.pdf), PCS, CatIQ, Swiss Re, Munich Re and Deloitte.

Recent climate changes are already having widespread impacts on human and natural systems,[1] resulting in an upward trend in the cost of insured losses associated with severe weather events.[2] Even if aggressive measures are undertaken immediately to reduce GHG emissions, further long-term changes in the climate system, such as sea level rise, rising warm temperature extremes and increasing heavy precipitation events, are expected to continue for decades.[3] The IPCC predicts that the net present value of the costs of damages from 2°C of warming in 2100 could be upwards of US$69 trillion.[4]

TD'S ACTION ON CLIMATE CHANGE

In 2008, TD identified climate change as an issue that was expected to have a growing impact on communities, businesses and the economy over the next several decades. Since then, we have been working to understand and mitigate the potential impacts of climate change on our customers, our business and the broader society.

1 IPCC (2014): *Climate Change 2014 Synthesis Report*, Summary for Policymakers, pg. 2; https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf.
2 Insurance Bureau of Canada (2019): *2019 Facts of the Property and Casualty Insurance Industry in Canada*; http://assets.ibc.ca/Documents/Facts%20Book/Facts_Book/2019/IBC-2019-Facts.pdf.
3 IPCC (2018): *Global Warming of 1.5ºC, Summary for Policymakers*; https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf.
4 IPCC (2018): *Global Warming of 1.5ºC, Chapter 3: Impacts of 1.5°C of Global Warming on Natural and Human Systems*, pg. 264; https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Chapter3_Low_Res.pdf.

2.0 Task Force on Climate-related Financial Disclosures

TCFD OVERVIEW

In 2015, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures, or TCFD, in response to concerns that climate change represented a systemic risk to the global financial system. Following a period of public consultation, the TCFD released its final recommendations in June 2017. Two years on, over 1,000 organizations have come out in support of the TCFD, including many of the world's largest institutional investors.[1]

Taken together, the 11 recommendations set forth by the TCFD represent a significant effort to provide lenders, insurers and investors with consistent, comparable, decision-useful and financially material climate-related information to enhance how climate-related risks are assessed, priced and managed. The TCFD asserts that organizations that implement the recommendations will be better able to evaluate their risks and exposures in the short, medium and long term.

TD'S APPROACH TO TCFD

We are committed to positioning the bank to thrive in a changing world. Helping our clients, customers and communities transition to a low-carbon economy through our investments, products, services and engagements is an important priority for the bank. TD believes climate change and the transition to the low-carbon economy present both risks and opportunities for the bank, our customers and clients.

TD's approach to addressing the TCFD recommendations is characterized by the following:

- **Thoughtful consideration:** TD has a thoughtful and methodical approach to guiding our businesses through the process of identifying, assessing and managing material climate-related risks and opportunities.
- **Rational approach to integration:** TD is committed to integrating the TCFD recommendations in a sensible manner that helps provide accurate information to support decision-making. To do so, we have outlined a multi-year approach that we report on to remain accountable for our progress.
- **Collaborative leadership to advance the industry:** TD actively participates in industry initiatives to build internal capacity and contribute to advancing TCFD-related practices across the industry.

We believe this approach enables TD to understand and manage climate change risks, drive business value and bolster our climate change awareness. The remaining sections in this report summarize TD's efforts to address the TCFD recommendations and highlight our many initiatives to support the responsible transition to a low-carbon economy.

TD Milestones

2009	• TD Economics issues its first paper on carbon pricing
2010	• First major North American-based bank to become carbon neutral
2013–2018	• Recognized by CDP as a top-performing Canadian bank for climate disclosure
2014–2019	• Listed on DJSI World Sustainability Index
2014	• First Canadian bank to issue a green bond • TD Insurance (TDI) becomes the second Canadian-based signatory to the UNEP FI PSI
2015	• TD joins Renewable Energy 100 (RE100); meets our 100% renewable electricity commitment
2016	• Helped protect 60,000 acres of critical forest habitat in the past five years and helped plant 900,000 trees since 1990
2017	• TD Friends of the Environment Foundation enters its 27th year with the support of more than 180,000 donors, having provided approximately $82 million to over 24,000 environmental projects and programs across Canada • TD issues US$1 billion green bond • TD announces its commitment to help support the transition to a low-carbon economy with a target of $100 billion, in total, toward initiatives in low-carbon lending, financing, asset management and internal corporate programs by 2030 • TD joins pilot programs convened by the UNEP FI to address the TCFD recommendations and is the only financial institution globally to participate in all pilots for lending, investment and insurance
2018	• TD publishes its first report addressing the TCFD recommendations
2019	• TD Economics publishes a report about the role of central banks in managing climate-related risks to the financial system[2]

[1] As of February 2020, 1,027 organizations had expressed their support for the TCFD; https://www.fsb-tcfd.org/tcfd-supporters/.
[2] https://economics.td.com/ca-climate-friendly-financial-systems.

TD'S PHASED APPROACH TO IMPLEMENTING TCFD RECOMMENDATIONS

	WORK TO DATE: ENGAGEMENT AND UNDERSTANDING	**CURRENT FOCUS:** INTEGRATION AND ANALYSIS	**FUTURE PRIORITIES:** EMBEDDING IN STRATEGY
PRIORITIES			
	• Understand TCFD recommendations • Identify climate-sensitive sectors • Explore industry climate scenario analysis methodologies	• Advance internal governance • Identify climate-relevant business segments • Test industry climate scenario analysis methodologies – Develop appropriate climate scenarios and methodology – Portfolio-level climate analysis and materiality assessment	• Extend scenario analysis • Formulate strategic responses • Integrate climate considerations into existing processes • Incorporate climate risks into enterprise stress-testing practices
APPROACH			
Governance	• Risk Committee of the Board • Corporate Governance Committee of the Board • Senior Executive Environmental Champion • Corporate Environmental Affairs • Corporate Citizenship Council	• TCFD Executive Steering Committee and Working Groups • Dedicated E&S Risk Management group • The Board participated in an educational session to improve understanding and promote awareness and discussion about climate-related risks and opportunities at the Board level • TD Insurance established an Advisory Board on Climate Change, comprising experts from a range of different fields, to develop and implement initiatives to address climate-related risks and opportunities in the communities we serve	• Establish process and guidelines for ongoing TCFD updates and documentation requirements
Strategy	• TD Ready Commitment (2018) • Carbon neutral bank (since 2010) • UN PRI • UN PSI • Equator Principles • RE100 • $1.7 billion in green bonds issued by TD since 2014 • UNEP FI TCFD industry pilots: lending (phase 1), investment, and insurance	• Continue progress to meet the target of a total of $100 billion by 2030 to help support the transition to a low-carbon economy through our lending, financing, asset management and internal corporate programs • Develop TCFD and climate scenario analysis approach • Initial assessment of risks and opportunities for TD's business segments (lending, investment and insurance) and TD's own operations • UNEP FI TCFD industry pilots: lending (phase 2) • Canadian Bankers Association TCFD Working Group • Support for Canada's objectives to meet the goals of the Paris Agreement • Support the recommendations of the final report of Canada's Expert Panel on Sustainable Finance • Supported innovation in the cleantech sector through TD's Sustainable Future Lab, introduced a new green Small Business Banking product, and invested in ArcTern Ventures' Fund II cleantech fund	• Complete assessment of risks and opportunities for TD's business segments and operations • Assess enterprise-level impact and materiality • Refine assessment methodology and expand scope • Explore integration with strategic planning process
Risk Manage-ment	• Introduced environmental and climate change considerations into existing risk management processes and governance	• Continued integration with existing enterprise risk management processes • Creation of a dedicated E&S Risk Management unit • Manage E&S risk as one of TD's enterprise Top and Emerging Risks; added it to the Enterprise Risk Catalogue	• Explore further integration within enterprise risk management processes and enhance monitoring and measurement
Metrics and Targets	• Scope 1, 2, and select categories of scope 3 emissions quantified (since 2006) • Target $100 billion, in total, toward initiatives in low-carbon lending, financing, asset management and internal corporate programs by 2030	• Measuring gross credit risk exposure to carbon-related assets relative to total assets • Measuring gross credit risk exposure by industry sector and to power generation (by energy source)	• Advance TCFD disclosure content and format • Further explore key climate risk and opportunity metrics

> "Climate leadership by financial institutions starts by understanding climate-related risks and opportunities in a forward-looking, scenario-based manner. This is a foundational step in order to assess resilience and to ultimately align portfolios with climate-compatible, low-carbon pathways. Using UNEP FI platforms, TD is working with other global financial institutions to better understand climate change impacts and is the only FI participating in UN-led TCFD pilots across all three financial business lines, including lending, asset management and insurance."
>
> **Remco Fischer, Programme Officer, UNEP Finance Initiative**

Industry Groups

CANADIAN BANKERS ASSOCIATION – TCFD WORKING GROUP

PURPOSE

Corporate Environmental Affairs and Risk Management participated in the working group to help ensure Canadian financial institutions are approaching TCFD consistently.

WHAT WAS LEARNED

Climate scenario analysis is the most complex and difficult TCFD recommendation to address, however, we believe there is value in developing a Canadian financial institution response to TCFD recommendations.

NEXT STEPS

Climate scenario analysis approach for lending (and possibly investment) portfolio.

UNEP FI PILOT – INVESTMENT

PURPOSE

Industry discussions on developing a more comprehensive framework for climate-based risk assessment, identifying sources of risk and measuring resilience across portfolios to future climate scenarios.

WHAT WAS LEARNED

The additional climate data and scenarios provided by Carbon Delta, an environmental fintech and data analytics firm, have further enriched the way we think about climate risks.

NEXT STEPS

Continue to explore scenario analysis tools to gain greater insights about the varied methodologies and understand which are best suited for application to TD Asset Management (TDAM) portfolios.

UNEP FI PILOT – INSURANCE

PURPOSE

TD Insurance (TDI) is involved with this pilot group to develop analytical tools to support insurance industry climate risk disclosures, providing information to investors, consumers and other stakeholders. The tools and indicators developed as part of the pilot will incorporate the latest scenario analysis to assess climate-related physical and transition risks in insurance portfolios. Since the pilot's focus is on non-life insurance, a separate life insurance working group has been established – TDI is participating in that group as well.

WHAT WAS LEARNED AND NEXT STEPS

Pilot in progress.

UNEP FI PILOT – LENDING

PURPOSE

Phase 1

Corporate Environmental Affairs participated in the industry's first organized attempt to conduct quantitative climate scenario analysis on banks' lending portfolios.

TD's participation was driven by: 1) a desire to understand the potential impact of climate risk on our business (lending, investment and insurance) and our operations, 2) an interest from investors and stakeholders, and 3) increasing support for TCFD among investors and corporations.

Phase 2

Both Corporate Environmental Affairs and Risk Management are participating in phase 2, which brings more banks, more scenario providers and more tools to the table in order to improve the methodology developed in phase 1.

WHAT WAS LEARNED

Phase 1

Tested UNEP FI tools and methodology on TD's sample data: power & utilities for physical risk and oil & gas for transition risk.

Helped pioneer and test a geospatial tool (Bloomberg MAPS) to conduct physical risk assessment.

Climate scenario analysis is challenging as methodologies were data-intensive, utilized many assumptions and often included manual and time-intensive approaches.

Overall, TD was successful in conducting scenario analysis and obtaining quantitative results. However, the scope was limited to a small sample of the bank's overall portfolio due to the various challenges and data issues mentioned above. More climate scenarios need to be explored, and more efficient tools need to be developed to assess the full portfolio and obtain disclosure-quality results.

Phase 2

Pilot in progress.

NEXT STEPS

Phase 1

Phase 1 concluded in Q3 2018. TD produced the physical risk case study "TD and Bloomberg Collaborate on Testing the Use of Geospatial Mapping for Physical Risk Assessment" which was included in the final report published by UNEP FI.

Phase 2

Kicked off in May 2019 and is currently in progress.

Scenario analysis approach will change based on location.

UN PRINCIPLES FOR RESPONSIBLE INVESTMENT

PURPOSE
TDAM is a signatory to the PRI, which measures ESG integration efforts, reflecting our view that integration of ESG into investment decision processes helps produce risk-adjusted returns that are more sustainable for our clients.

WHAT WAS LEARNED
The PRI have provided an avenue through which we can regularly measure our ESG integration progress, illuminating our strengths as well as areas/methods in which we can further expand our ESG approach.

NEXT STEPS
Build on progress, continuing to internalize best practices while also recognizing new developments in ESG analytics.

Continue to strengthen our ESG integration efforts, building awareness about new and ongoing processes to monitor ESG risks and opportunities.

INSURANCE BUREAU OF CANADA

PURPOSE
The Insurance Bureau of Canada (IBC) is the national industry association representing Canada's private home, auto and business insurers. Its member companies represent 90% of the Canadian property and casualty (P&C) insurance market.

WHAT WAS LEARNED
As a member, TDI leads and participates in a number of committees and working groups that address climate-related risks and the effects of severe weather, including:

- Personal Lines Committee
- Flood Working Group
- Earthquake Working Group
- Communication Advisory Committee
- Specific Issues Working Group
- Claims Advisory Group

On these and other issues, TDI works with industry partners, regulators and governments to better protect Canadians and their assets.

NATIONAL ROUNDTABLE ON FLOOD RISK

TDI participated in a meeting hosted by then Minister of Public Safety and Emergency Preparedness Ralph Goodale and IBC held in Saskatchewan in November 2017 to launch the National Roundtable on Flood Risk. The goal was to launch a formal national dialogue on flood risk and discuss steps to address the challenge. Since then, a number of advisory and working groups have been formed. TDI participates in two working groups addressing consumer engagement and the financial risk of floods.

CDP INVESTOR MEMBER

PURPOSE
TDAM is a signatory of CDP and is committed to supporting efforts to improve environmental disclosures.

WHAT WAS LEARNED
The CDP reporting platform provides us with a more complete source of data.

NEXT STEPS
Continue to support CDP's efforts to encourage companies to improve disclosure.

UNEP FI PRINCIPLES FOR SUSTAINABLE INSURANCE

PURPOSE
The UNEP FI PSI serve as the global framework for insurance companies to better manage ESG risks, as well as opportunities in their core business strategies and operations.

WHAT WAS LEARNED
In 2014, TDI became the second Canadian signatory. Since then, we've made significant strides in incorporating the principles into all aspects of our insurance operations.

NEXT STEPS
Our annual public disclosures on PSI-related activities are available online:
- 2015
- 2016
- 2017
- 2018
- 2019

CANADIAN ASSOCIATION OF DIRECT RELATIONSHIP INSURERS

PURPOSE
The Canadian Association of Direct Relationship Insurers advocates for flexible and evolving regulatory and legislative frameworks governing automobile, property and commercial insurance. The aim of TDI's involvement is to support product and service innovation so that Canadians can easily choose insurance that serves their needs through the delivery channels of their choice.

WHAT WAS LEARNED
TDI leads and participates in a number of task forces and working groups, including the Residential Task Force, where TDI works to improve disclosures to consumers with the goal of helping them to better understand and manage their risks.

EQUATOR PRINCIPLES

PURPOSE
TD has been a signatory to the Equator Principles (EP) since 2007. As a signatory to the EP, TD reports annually on projects assessed according to the EP framework. TD participated in the consultation on updates to the principles (EP4), which included discussions about how to align the principles with evolving E&S risk practices.

TD attended the annual meeting of the Equator Principles Association in Singapore, where EP4 was tabled.

WHAT WAS LEARNED
TD believes that the EP framework has generally provided its members with strong principles to guide their work and advance their business while maintaining the goodwill of the communities they serve.

NEXT STEPS
TD continues to report annually on projects assessed according to the EP framework.

TD is supporting the development of guidance on the implementation of EP4, which we believe to be important to further understanding and applying the principles.

CANADIAN STANDARDS ASSOCIATION – GREEN TAXONOMY

TD is participating in a Canadian Technical Committee to develop a National Standard of Canada for Green and Transition Finance.

3.0 **Governance**

Strong governance anchored by a well-defined risk culture is what will enable TD to deliver on our purpose while ensuring we maintain the trust of our customers today and into the future. As the banking landscape evolves, TD must increasingly manage both traditional and emerging risks while continuing to deliver value for our customers, communities, colleagues and shareholders. Hear from our leaders on how we manage environmental and social (E&S) risks.

Bharat Masrani, Group President and Chief Executive Officer, **Brian M. Levitt**, Board Chair, and **Norie Campbell**, Group Head, Customer and Colleague Experience, discuss TD's business strategy, underpinned by a strong risk culture.

Why is strong governance important to how we manage environmental risks and opportunities?

Bharat: Anchored in our purpose to enrich the lives of our customers, communities and colleagues, strong governance is the cornerstone of long-term responsible growth.

It is also key to the sustainability of our business, whether it's managing emerging risks or identifying opportunities to create value. TD's environmental commitment and risk culture, combined with proactive executive engagement and Board oversight, has helped set TD apart in Canada. We have been carbon neutral since 2010, introduced new and innovative green bonds to the market, and we were the first Canadian bank to set a clear financial target in support of the transition to a low-carbon economy.

Brian: TD's Board of Directors is focused on creating sustainable growth and long-term value for our shareholders.

As global forces shift, so do the risks and opportunities ahead. The bank's risk management processes, and oversight from its Risk Committee, facilitates a thorough understanding of emerging risks, including climate risk, that they are being addressed by management and that they inform our long-term strategy.

How are TD's governance efforts evolving to anticipate emerging climate and social related risks and opportunities?

Bharat: TD has a long track record of environmental leadership, and we recognize that strong governance on climate-related risks and opportunities is vital to maintaining our position and creating long-term value for shareholders. We believe that the private sector plays an important role in creating solutions that advance both economic growth and address critical challenges such as climate change.

In 2019, climate risk was identified as a top and emerging Risk for the bank, and we formalized a new E&S risk function to advance our approach to environmental, social and climate-related risks and disclosures. We also approved the creation of a Sustainable Finance Executive Council to identify and oversee execution on opportunities to create value by enabling a balanced transition to a low-carbon economy.

Brian: The Board recognizes and supports the development and delivery of a strategy that manages our climate-related risks and opportunities, including TD's broad efforts to accelerate the transition to a low-carbon economy. Once the strategy is established, the role of the Board is to monitor our progress and to provide oversight of the risks and risk-mitigation plans. As part of our oversight, we are increasing our education and engagement with the business on climate-related topics, including a dedicated climate change education session for the Board this year, and regular ESG updates to Board members.

What are the key commitments TD is making to support the climate and community?

Norie: TD recognizes that long-term growth and a focus on climate change are interconnected priorities. Across the bank, we are demonstrating our commitment by embedding climate change considerations into our business strategies and processes.

TD's TCFD working group and steering committee are focused on enabling cross-enterprise understanding and alignment on climate-related risks. The Corporate Environmental Affairs team supports the businesses in understanding climate-related opportunities and tracking our progress against our target of $100 billion in low-carbon lending, financing, asset management and internal corporate programs to accelerate the transition to a low-carbon economy. These changes will allow us to build on our strong foundation to further embed climate change considerations in individual business lines in alignment with the bank's strategy.

At the community level, through our corporate citizenship platform, the TD Ready Commitment, and through TD Friends of the Environment Foundation, we are enabling our customers, communities and colleagues to support the transition to a low-carbon economy and to grow and enhance green spaces for all – there is more information on our Vibrant Planet impact in the 2019 TD Ready Commitment Report.

Ultimately, sustainable growth is also about culture and tone from the top. Leaders across the bank promote our efforts, articulate its importance and champion the work needed to deliver sustainable growth well into the future.

KEY ACCOMPLISHMENTS

- Established the Sustainable Finance Executive Council to develop an enterprise-wide sustainable finance strategy.
- Formally included E&S risk oversight in the OROC mandate.
- Held a dedicated educational session for the Board to foster informative dialogue, explore perspectives on assessing and managing climate risk and related investment strategies, and gain a better understanding of the current climate change risk landscape.
- TDI established an Advisory Board on Climate Change, comprising experts from a range of different fields, to develop and implement initiatives to address climate-related risks and opportunities in the communities we serve.

APPROACH

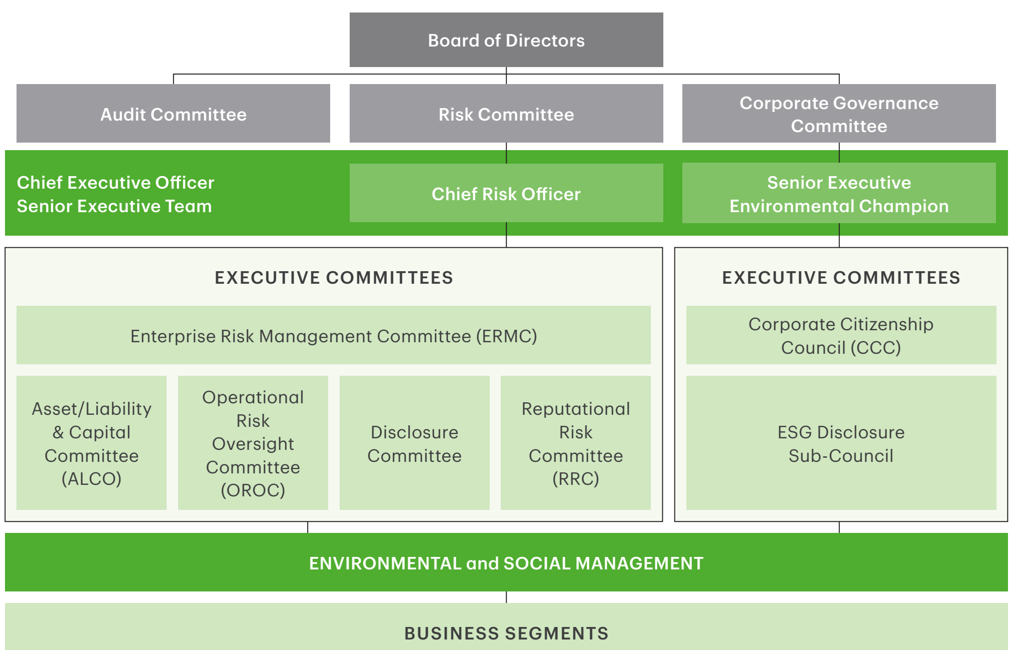
TD believes that strong Board and executive oversight of climate-related issues is essential for assessing and managing potential impacts on our business strategies and financial performance now and in the future. That is why we are integrating climate-related risk and opportunity considerations even further into our existing comprehensive governance structures.

BOARD OVERSIGHT

TD's Board of Directors oversees the implementation of an effective risk culture and internal control framework across the enterprise. As part of its mandate, the Board oversees controls and risks related to climate change issues affecting TD and its stakeholders. It accomplishes this mandate through its committees, including the Risk Committee of the Board ("Risk Committee") and the Corporate Governance Committee of the Board ("Corporate Governance Committee"). The Risk Committee oversees risk management, including climate-related physical and transition risks, while the Corporate Governance Committee provides oversight and direction on the bank's climate-related commitments, targets and performance. The Board and its committees also consider climate-related issues in reviews of major action plans and policies, including our strategy for supporting the transition to a low-carbon economy.

TD Board Educational Session

As part of its mandate, the Risk Committee is actively engaged in the determination and review of TD's Top and Emerging Risks. In 2019, climate change was added as a risk. In response, the Board participated in a dedicated educational session involving internal and external expertise to foster informative dialogue, explore perspectives on assessing and managing climate risk and related investment strategies, and gain a better understanding of the current climate change risk landscape.



MANAGEMENT

The Senior Executive Environmental Champion is responsible for promoting climate change issues at TD, with support from the Corporate Citizenship team. Within the Corporate Citizenship team, the Head of Environment leads the Corporate Environmental Affairs team, which is responsible for developing TD's environmental strategy, setting environmental performance standards and targets, and reporting on performance.

TD also has an enterprise-wide Corporate Citizenship Council (CCC) comprising senior executives from TD's business segments and corporate functions. As part of its mandate, the CCC is responsible for identifying and addressing significant E&S risks to the bank, tracking key metrics to monitor progress on the bank's E&S initiatives, and driving awareness of the bank's E&S goals, targets and commitments across all lines of business. TD's business segments are responsible for implementing the environmental strategy and managing associated risks within their units.

TCFD EXECUTIVE STEERING COMMITTEE (ESC)	
Who:	• Business segment and corporate function executives (relevant to TCFD)
Purpose:	• Act as champions within respective groups; represent the interests of businesses, facilitate any escalation and approval processes, and allocate required resources for TCFD • Provide input and sign-off on climate assessment scope and methodology • Review assessment results and disclosures
Outcome:	• Endorse TCFD results and disclosures to the Board and executive committees

TCFD WORKING GROUPS (WG)	
Who:	• Business segment and corporate function lead representatives and subject matter experts
Purpose:	• Recommend assessment scope and methodology • Perform climate assessments to determine materiality • Participate in industry working groups
Outcome:	• Recommend TCFD results and disclosures to the TCFD ESC

Corporate Environmental Affairs	• Act as environmental subject matter experts • Participate in industry working groups and help lead WG discussions • Monitor industry best practices • Ensure consistency and alignment between WGs

TD Insurance Advisory Board on Climate Change

In March 2019, TDI established its Advisory Board on Climate Change, a first for the Canadian insurance industry.[1] The Advisory Board comprises experts from Engineers Canada and six top Canadian universities with expertise in fields related to climate change, severe weather and its impact on people and our planet. The Advisory Board, with the support of TDI executives, is focused on developing initiatives to address key climate change issues and identify opportunities for change that are of interest to TDI and the communities it serves.

UPCOMING PRIORITIES

In 2020, TD intends to continue to enhance its governance practices to effectively manage climate change issues. At the management level, TD is integrating new responsibilities for climate change across many business units so that relevant risks and opportunities are being integrated into how we do business.

[1] http://td.mediaroom.com/2019-04-09-TD-Insurance-creates-Advisory-Board-on-Climate-Change.

4.0 **Strategy**

We are committed to giving customers, communities and colleagues the confidence to thrive in a changing world. Readying ourselves and our stakeholders for the transition to the low-carbon economy is an important priority for the bank.

For over a decade, TD has embedded short-, medium- and long-term climate change considerations into our business strategies, including direct impacts to our operations, as well as indirect impacts associated with our customers. TD is now working across its business segments to monitor our exposure to climate-related risks and opportunities and to identify their implications. In doing so, we aspire to be ready for the future by stress-testing our strategies against different climate change scenarios.

KEY ACCOMPLISHMENTS

- TD was the first Canadian bank to issue a green bond, a $500 million bond that matured in 2017, and we issued a second bond in 2017, a US$1 billion bond that will mature in 2020.
- To capitalize on climate-related opportunities, we announced the launch of a Small Business Banking product, free for cleantech entrepreneurs, to help them bring their ideas to market.
- To advance the transition to a low-carbon economy, we supported the Accelerator Centre in establishing the TD Sustainable Future Lab in Waterloo, Ontario, to support cleantech startups to scale their businesses. In 2019, the program was recognized as a Top Project by Clean50, an annual award honouring and connecting outstanding contributors to sustainable development and clean capitalism in Canada.
- In September 2019, TD invested in ArcTern Ventures' second fund to advance emerging cleantech innovation.

APPROACH

Assessing our climate change risks and opportunities provides a unique lens through which to evaluate how our business can adapt to changing regulations and consumer preferences. Integrating relevant climate considerations into our business decisions continues to support our long-term growth strategy. For example:

- In 2017, we launched a set of environmental initiatives that included a target of $100 billion, in total, in low-carbon lending, financing, asset management and internal corporate programs by 2030, and we are well on our way to meeting this target.
- TD was the first carbon neutral bank in Canada and was also the first Canadian bank to issue a green bond ($500 million issued in 2014; US$1 billion issued in 2017).
- We have an active green bond underwriting practice and green investment strategy and are signatories to the UNEP FI's PRI and PSI, Equator Principles and RE100.
- We have also supported climate adaptation research for our insurance clients, participated in the carbon credit market, and developed new products such as the TD Auto Finance loans for electric and hybrid vehicles and climate change-related TDI products.

A comprehensive account of our climate-related risks and opportunities is disclosed annually in our CDP Climate Change response.[1] TD is taking several steps to discern the impacts that these risks and opportunities, along with others, are having on our business strategies and financial performance.

E&S risks may lead to potential losses, resulting from TD's direct and indirect impact on the environment and society, and the impact of E&S issues on TD (including climate change). Direct risks are associated with the ownership and operation of TD's business, which include management and operation of company-owned or managed real estate, fleet, business operations, and associated services. Indirect risks are associated with environmental performance or environmental events, such as changing climate patterns that may have an impact on TD's retail customers and clients to whom TD provides financial services or in which TD invests. Environmental and related social risks are managed under TD's Environment Policy and through related business segment level policies and procedures across the enterprise. Additionally, emerging social risks are managed through governance forums, including Reputational Risk Committees (with the approach being reviewed, including at the policy level).

Products and Services: TDI Extended Water Damage Coverage

In April 2019, TDI introduced an extended water damage product – a new and easy-to-understand endorsement that includes coverage against sudden and accidental water damage caused by sewer backup, sump pump failure, ground and surface water entering a home below ground level, as well as fresh water overland flooding. As part of the coverage, TDI is also offering, in the event of a paid loss, an indemnity of up to $1,000 toward the cost of installing a backwater valve or sump pump with a power backup system, which could help prevent future losses.

[1] https://www.td.com/document/PDF/ESG/2019-CDP-Submission.pdf.

MOVING THE DIAL ON GREEN BONDS

We support the growth of the green bond market across a number of our business segments through issuance, underwriting and investing.

Issuing

US$1 billion

TD Bank has issued two green bonds to date, a $500 million bond that matured in 2017 and a US$1 billion bond maturing in 2020. With its second green bond issuance, TD continues to help drive growth in the green bond market, bringing the total amount of green bonds issued to $1.7 billion[1] since 2014. The TD Green Bond issued in 2017 was upsized from US$500 million to US$1 billion, was oversubscribed and attracted 70% green investors and 10 new investors to the bank.

Some of the projects funded by the 2017 TD Green Bond issuance

Centre for Addiction and Mental Health (CAMH): Construction of two modern buildings that are projected to earn LEED Gold certification in Toronto

Solar Power Generation: Feed-In Tariff (FIT) solar power generation sites in Northern Ontario

Energy Services Acquisition Program – Energy Services Modernization: Modernization and expansion of an existing district energy system (DES) in Ottawa (National Capital Region)

For detailed information on these projects, see the 2019 Green Bond Use of Proceeds.

Investing

$1.3 billion

TD's Treasury and Balance Sheet Management team considers green investments when compiling their investment portfolios for the bank. Since 2014, TD's Treasury Group has purchased approximately $1.3 billion in green bonds as part of managing the bank's investment portfolio, which includes $340 million purchased in 2019.

Underwriting

Over $21 billion[2]

led by TD in sustainable bond underwriting since 2010

Example: US$1 billion issue – TD Securities was an active bookrunner and advisor for Duke Energy's inaugural issue of green bonds, one of the largest issuances for the utility industry. The bond's proceeds will finance green energy projects, including zero-carbon solar and energy storage, in North Carolina and South Carolina.

The TD Securities Debt Capital Markets team has a strong role in expanding green bond markets through underwriting bonds for issuers globally. TD Securities has over the years expanded its portfolio to underwrite sustainable development bonds (SDB) – bonds linked to the UN SDGs, including the Inter-American Development Bank inaugural SDB and the International Bank for Reconstruction and Development (The World Bank) SDB. This year, TD Securities also underwrote the first-ever Secured Overnight Financing Rate green bond.

TD Bank Group Green Bond Investment Statement

We believe that incorporating environmental considerations as one of the many facets of our investment decision-making contributes to the overall economy and long-term sustainability of the environment. As such, we intend to allocate a portion of new bond purchases in our Treasury investment portfolio to green investments that align with our investment strategy.

Member of the Green Bond Principles

TD continues to enhance its Green Bond Framework, with the most recent issuance aligned with the 2017 Green Bond Principles, the most up to date at time of issuance. We align with internationally recognized frameworks such as the Green Bond Principles to guard against greenwashing. For TD's green bonds specifically, we also employ third parties for both assurance and second opinions to ensure the validity of our measured impacts and green criteria. TD Bank is a proud member of the Green Bond Principles and an active participant on the International Capital Market Association (ICMA) Social Bonds and Green Projects Eligibility working groups for 2019–20.

1 The figure is the total of the $500 million bond and the Canadian dollar value (at the trade date) of the US$1 billion bond.
2 Reflects the apportioned-value of lead managed green, social, and sustainable bond underwriting by TD.

SCENARIO ANALYSIS

Scenario analysis can enable TD to structure and frame our thinking on the resilience of our business strategies to climate change risks and opportunities in a highly complex and uncertain future. We intend that the foresight we glean from this process will provide the input for management discussions about the ways we can best prepare for several plausible future climate conditions.

Scenario analysis is an emerging industry practice. TD is dedicated to undertaking the process thoughtfully to gain valuable insight into our overall business strategy. As such, we have embarked on a multi-year journey to conduct climate scenario analysis, using new methods, data and tools. In this report, we outline our approach and progress in laying the foundation for our analysis. As our scenario analysis practice matures, so too will our analytical inputs and results.

To pioneer new practices and drive progress across the sector, TD is participating in the UNEP FI pilot studies alongside other leading global financial institutions. These pilots are fostering a better understanding of the resilience of our lending, investment and insurance portfolios to climate-related impacts. Results of the studies are helping to inform methodologies for assessing our financial risks and opportunities under various climate scenarios.

> "Because it is early days, we have found that scenario analysis is not an easy, off-the-shelf, one-off approach. It is an iterative process, so it is important to start by really understanding what scenario analysis means and how it can be applied."[1]
>
> **Investor Leadership Network TCFD report**

TD ECONOMICS

Central Banks Give a Green Light to Climate-Friendly Financial Systems

DOWNLOAD THE FULL TD ECONOMICS PAPER HERE

Understanding the resilience of TD's business strategies in different climate scenarios is a highly complex activity and challenging for several reasons. First and foremost, the exact nature of the structural changes underway are highly uncertain. Notably, physical risks stemming from increased frequency of weather events, magnitude of natural disasters, and variability of weather are observable today but are hard to predict into the future. Historically, global economic costs from natural disasters have exceeded the 30-year average of US$140 billion per annum in seven of the last 10 years,[2] while the average annual number of extreme weather events increased from 490 over the past 30 years to 605 in the past decade.[3] However, future physical cost estimates are often inconsistent and not comprehensive enough for a holistic assessment of the future economic outlook.

Uncertainty associated with the pace of transition to a low-carbon economy creates an additional challenge to any forward-looking assessment. Data on climate-related risks and their impact on asset returns is scarce, and whatever data is currently available spans over too short a period of time. There is also a need to develop expertise in climate-related data analysis and modelling frameworks. Existing macroeconomic modelling frameworks differ in the way they incorporate assumptions related to the transition in energy, land, urban, infrastructure and industrial systems. Most of the models currently in place have limitations that make them not fully suitable for analyzing climate-related risks, but all modellers generally agree that the speed and timing of transition are important to macroeconomic outcomes. If this transition is gradual and inspired by well-designed policies, the macroeconomic and financial impacts would likely deliver net macroeconomic and financial benefits.

1 https://www.investorleadershipnetwork.org/wp-content/uploads/2019/09/ILN_TCFD-Implementation_final.pdf
2 https://natcatservice.munichre.com/overall/1?filter=eyJ5ZWFyRnJvbSI6MTk4MCwieWVhclRvIjoyMDE4fQ%3D%3D&type=1.
3 https://www.munichre.com/content/dam/munichre/global/content-pieces/documents/302-09092_en%20(6).pdf.

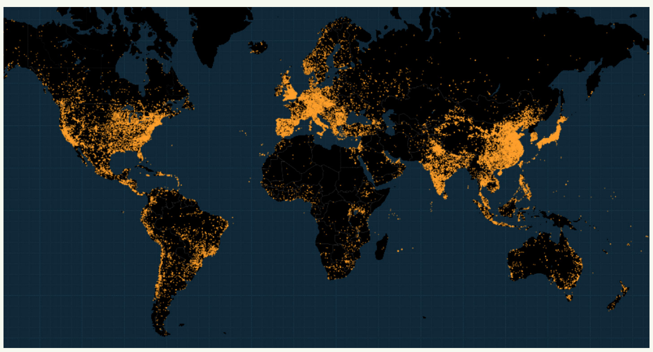
UNEP FI LENDING PILOT CASE STUDY:

TD and Bloomberg Testing Geospatial Mapping for Physical Risk Assessment[1]

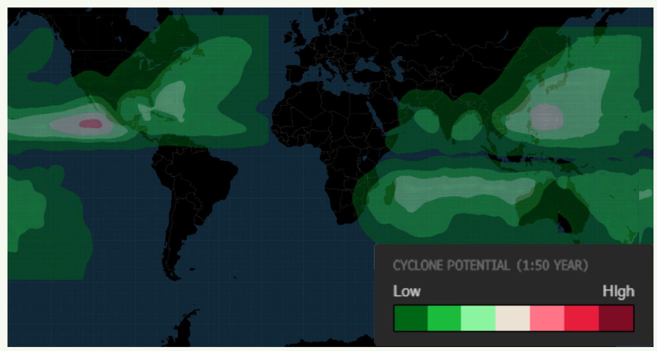
TD collaborated with Bloomberg and Acclimatise to use an innovative geospatial solution for assessing physical risks of climate change (from both incremental changes and extreme weather events) to borrower credit ratings within the bank's lending portfolio. The approach was applied to the physical risk assessment methodology from Acclimatise as part of the UNEP FI pilot study. Use of a geospatial tool such as Bloomberg MAPS provided efficiencies through its ability to overlay and analyze multiple datasets – bringing together geographic data on projected climate change with locations of borrowers' facilities and corresponding financial and production data. Bloomberg MAPS pulled input data and information directly from the Bloomberg network.

The figure below illustrates the use of Bloomberg MAPS to overlay physical asset information (Map 1) with climate data (Map 2) in order to visualize and assess the exposure of global power plants to cyclone risk (Map 3). TD believes that using geospatial mapping for the assessment of physical risk from climate change provides a flexible and scalable approach that can be applied to a range of sectors and climate scenarios.

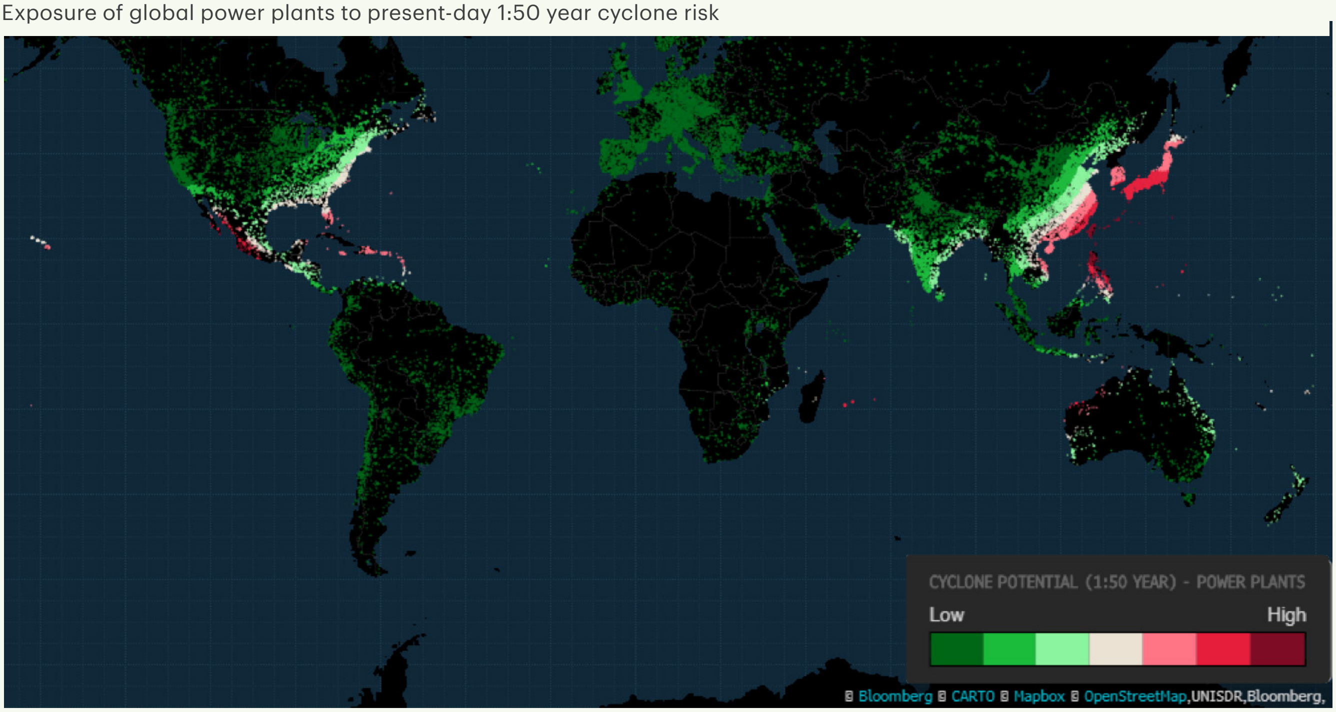
(Map 1) Physical Asset Map:
Global power plants location



(Map 2) Climate Map:
Present-day 1:50 year cyclone risk



(Map 3) Map of Exposure of Physical Assets to Climate Risks:
Exposure of global power plants to present-day 1:50 year cyclone risk



Source: Bloomberg

[1] UNEP FI (2018): *Navigating New Climate*, pg. 38.

UNEP FI INVESTOR PILOT CASE STUDY:

TDAM Testing Carbon Delta Scenario Analysis Approach[1]

TD Asset Management (TDAM) is a wholly-owned subsidiary of TD, having assets under management of US$268.6 billion.[2] As a North American investment management firm, TDAM serves a large and diversified client base, including pension funds, corporations, institutions and high-net-worth and retail individuals, and has leading market positions in passive, quantitative and active portfolio management.

TDAM participated in the UNEP FI pilot for investors to develop methodologies for assessing an organization's resilience to future climate scenarios. TDAM piloted Carbon Delta's scenario analysis tool on two of its investment portfolios under a 2°C scenario, a warming level in line with that agreed upon in the Paris Agreement. To trial Carbon Delta's scenario tool, TDAM provided holding data for two equity portfolios, one that holds global equities (with its largest revenue exposures in Asia-Pacific, Europe, the U.S. and Canada) and is benchmarked against MSCI ACWI and a second one predominantly consisting of Canadian equities and benchmarked against the S&P/TSX Composite Index.

The analysis derived the prospective Climate Value at Risk (CVaR), or the potential loss a portfolio could face given the costs that the underlying companies would incur to achieve a global warming of 2°C. For the Global Equity portfolio, Carbon Delta's model estimated a CVaR of -5.2%, with the main drivers of loss coming from policy risk (-5.5%) and the physical risk from extreme heat (-0.9%). The Canadian Equity portfolio has a lower CVaR of -3.2%, with similar drivers (policy risk VaR of -3.2% and -0.4% from extreme heat).

For the portfolios analyzed, the utilities sector made up 73% of total CVaR in the case of the Canadian Equity portfolio and 52% of CVaR for the Global Equity portfolio. This is because the utilities sector has higher carbon emissions and carbon intensity (total tCO_2e/sales) relative to other sectors. Energy, industrials and consumer staples were also major contributors to CVaR.

UPCOMING PRIORITIES

Through our involvement in UNEP FI pilots and our own internal initiatives, TD continues to lay the foundation for thoughtful, comprehensive scenario analysis across our business segments. TD also plans to continue assessing which climate-related risks and opportunities could affect different business segments and intends to perform comprehensive stress-testing against different climate scenarios.

[1] UNEP FI (2019): Changing Course, pg. 111.

[2] Assets under management as of December 31, 2018, for TD Asset Management Inc., TDAM USA Inc., TD Greystone Asset Management and Epoch Investment Partners, Inc. TD Asset Management operates through TD Asset Management Inc. in Canada and through TDAM USA Inc. in the United States. TD Greystone Asset Management represents Greystone Managed Investments Inc., a wholly-owned subsidiary of Greystone Capital Management Inc. ("GCMI"). All entities listed are affiliates and wholly-owned subsidiaries of The Toronto-Dominion Bank.

5.0 **Risk Management**

Insights from Senior Management

Interview with Ajai Bambawale (Group Head and Chief Risk Officer)

Why are climate-related risks important to TD?

This is an evolving and complex area of risk with potential to impact not only our businesses and industry but also those of our customers and the communities we operate in. Understanding the landscape of existing and emerging risks is one of the ways that TD prepares for the future. Developing insights into our risk exposures and proactively managing them helps us, and our stakeholders, thrive in a changing world. Climate change presents an interconnected set of risks and opportunities for TD, and we consider it part of our responsibility to assess and manage the associated risks and impacts.

What are the challenges when it comes to managing climate risk?

Climate change-related risks and impacts are global issues with far-reaching potential impacts. When we think about the risks and impacts, we are looking at both the physical implications of climate change, like acute weather events, and those associated with transitioning to a lower-carbon economy. This means looking at a very wide set of variables and factors, including societal and market views and shifts, as well as environmental and business data. At the same time, there are uncertain and extended time horizons for changes, impacts and risks to materialize. In many instances, past data or history is not necessarily indicative of future performance or results. As a result, we see the assessment and management of climate risks as an area that is still maturing.

What does climate change risk management at TD look like?

As we discuss in this report, TD's approaches to managing climate-related risk continue to evolve. Some key aspects include our robust enterprise risk management governance, forums and processes to help identify, assess and manage material known and emerging risks, which include environmental and climate change risk. In 2019, TD identified climate change risk as a Top and Emerging Risk for the bank and formally established an E&S risk function, which also has dedicated focus on climate change risks. Integrating climate change considerations into our key risk management practices also helps TD understand the interaction between climate change and other risks the bank and its customers and clients may face. The methods for assessing the impacts of climate-related risks on financial institutions and our products and services continue to be established globally, and we are actively working to help advance this work. In addition to the work we do at TD, as described in this report, we are deeply involved in industry and international groups and projects and committed to helping develop best practices for measurement and analysis that can be used consistently in our sector.

KEY ACCOMPLISHMENTS

- E&S risk was added as an enterprise Top and Emerging Risk, resulting in its consideration in all senior-level risk management committees.
- Established a new E&S Risk Management unit, operating under the Operational Risk Management team, to enhance the frameworks and policies needed to actively manage climate-related risks.
- E&S risk was also added to TD's Enterprise Risk Catalogue, our tool for aggregating data on various risks to the bank and assessing vulnerabilities and drivers across each of TD's business segments.
- Piloted an enhanced tool to help identify E&S risks in our business customer transactions and to prompt increased due diligence; industry reviews were performed to support efforts to further our understanding of climate change risks in lending considerations.
- Reviewed E&S exposures and risks through targeted portfolio or sector reviews.

IDENTIFYING, ASSESSING AND MANAGING CLIMATE-RELATED RISKS

TD's approaches to measuring climate-related risk continue to evolve. Currently, these include reviews of lending and investing exposure to industries that are vulnerable to the impacts of climate change, as well as industries that will thrive in the transition to a low-carbon economy, and managing TD's GHG emissions and energy use. These approaches are used in combination with qualitative techniques, such as industry and peer comparisons.

In addition, climate-related risks are identified as part of TD's credit and investment risk management processes which incorporate ESG factors. TD identifies and mitigates credit risk through policies and procedures that value and manage financial and non-financial security. TD's environmental due diligence tools for non-retail lending consider the disclosed GHG emissions footprints and readiness to respond to emerging regulations of clients in carbon-intensive industries.

Our approach takes into consideration both physical and transition risks. Assessing climate-related risk exposure for a large financial institution is complex, considering the number of clients carrying out business activities across numerous regions and industry sectors, complicated by a variety of financial exposures (e.g., loans, investments, insurance policies, etc.). As such, there are numerous layers of risk factors that must be considered when assessing the overall impact from climate risk.

- **Location:** geographic location of physical assets
- **Physical Climate Risk:** projected future climate conditions
- **Transition Climate Risk:** projected future climate-related economic factors
- **Sector:** industry sector and associated vulnerabilities to climate impacts
- **Financial Exposure:** type of financial exposure (e.g., loans, investments, insurance policies, etc.)

Our approach to managing and mitigating our climate-related business risks includes governance forums, policies and procedures, ongoing analysis and client engagement.

For example, climate-related risks are raised to the relevant business segments to determine whether to accept, transfer or mitigate risks, develop mitigation plans as needed, and carry out regular monitoring and reporting.

Integration of ESG into TD Asset Management

TDAM's Investment Risk team has initiated an ESG dashboard to more systematically advance ESG conversations internally. The dashboard puts forward various ESG indicators, including climate-related metrics, to help uncover ESG risks within portfolios and to help guide conversations about those risks. When reviewing the dashboard, investment teams can compare other ESG signals as well, particularly those developed via fundamental research. From there, analysts can engage companies on the issue areas deemed most significant and encourage improved disclosure where appropriate.

The dedicated ESG Engagement Committee that oversees TDAM's overall ESG strategy, integration and implementation facilitates discussion around ESG issues, engagements and policy direction. Discussions are shared across teams to further ESG integration efforts.

INTEGRATING CLIMATE-RELATED RISKS INTO TD'S ENTERPRISE RISK MANAGEMENT APPROACH

To identify and assess risks, we integrated E&S risk as an enterprise Top and Emerging Risk, resulting in its consideration in all senior-level risk management committees. To measure climate-related risks, E&S risk was added into TD's Enterprise Risk Catalogue, our tool for aggregating data on various risks to the bank and assessing vulnerabilities and drivers across each of TD's business segments. Lastly, we established a new E&S Risk Management unit, operating under the Operational Risk Management team, to enhance the frameworks and policies needed to actively manage climate-related risks.

CHALLENGES

The IPCC acknowledges that reducing the impacts of climate change requires a transition to a low-carbon economy.[1] The oil and gas sector represents Canada's largest source of GHG emissions; however, it is also a prominent pillar of the Canadian economy.[2]

We believe that economic growth and environmental sustainability are intrinsically linked, and that we have a responsibility to play a positive role in fostering both. TD is proactively assessing the exposure that different sectors have to both physical and transition climate risks as a foundational step to inform how TD will control and manage our investment, lending and insurance practices in the future. We see this as an important step for managing risks and stress-testing our resilience to different climate scenarios and for guiding our business strategy moving forward.

UPCOMING PRIORITIES

In 2020, TD will continue to explore opportunities to further integrate climate-related risks into our broader enterprise risk management processes. We intend to continue incorporating ESG considerations, including climate-related risks, into our asset management and non-retail lending decisions.

1 https://www.ipcc.ch/sr15/.
2 Final Report of Expert Panel on Sustainable Finance (2019), pg. 39; http://publications.gc.ca/collections/collection_2019/eccc/En4-350-2-2019-eng.pdf.

6.0 Metrics and Targets

TD currently uses a variety of metrics and targets to monitor our exposure to climate-related risks, to discern if and how our activities are mitigating those risks and to develop insights into new business opportunities.

Developing Innovative New Metrics

In 2019, we developed new metrics to assess our credit exposure to carbon-related industries, as defined by TCFD. To do so, we participated in an industry working group that brought together Canadian financial institutions to discuss TCFD-related disclosures. We used the metrics identified to assess our gross credit exposures to carbon-related assets, as well as to power generation by energy source.

CARBON-RELATED ASSETS RELATIVE TO TOTAL ASSETS

We are introducing a climate-related risk metric that measures our exposure to carbon-related assets relative to our total gross credit risk exposure (excluding counterparty credit risk exposures to repo-style transactions and OTC derivatives).[1] To define carbon-related assets, TD follows the Task Force on Climate-related Financial Disclosures' suggested definition of: "those assets tied to the energy and utilities sectors under the Global Industry Classification Standard (GICS), excluding water utilities and independent power and renewable electricity producer industries". The metric is intended to be an early assessment of climate-related risks and to help monitor our concentration and exposure to climate-sensitive industry sectors over time.

Our exposure to carbon-related assets totalled $31 billion in fiscal year 2019, or approximately

2.7%

of our total gross credit risk exposure, as at October 31, 2019.

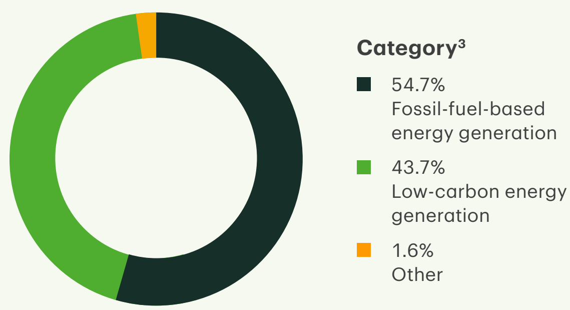
GROSS CREDIT RISK EXPOSURE TO POWER GENERATION

Power generation is a subset of power and utilities and also includes customers from other industry sectors that generate power. It includes customers that generate power and excludes those that are purely involved in transmission and distribution or non-power generation. Calculated on a customer-by-customer basis using the most recent publicly available information on generation capacity (in megawatts) of energy source.

Our total gross credit risk exposure to power generation was

$6.8 billion,[2]

as at October 31, 2019.



[1] As reported under Basel Pillar 3 CRB (e) columns A, B and C; see TD's 2019-Q4 Supplemental Regulatory Disclosure, pg. 17.
[2] Generation obtained through power purchase agreements (PPAs) is not considered. Also, fuel cell and other fuel storage projects are not included.
[3] Fossil-fuel based generation includes natural gas, oil and coal. Low-carbon includes nuclear, hydroelectric and renewables (wind, solar and biomass). Generation that cannot be allocated to any of the listed generation types is included in other.

2019 METRICS AND TARGETS

BUSINESS LINE	METRIC (Target–Where Applicable)	2019 RESULTS
	RISKS	
Credit/Lending	Carbon-related assets relative to total assets (%)	2.7%
	Gross credit risk exposure to environmentally sensitive industry sectors	See 2019 ESG Report
	Gross credit risk exposure to power generation	$6.8 billion
Investment	Applicable transactions reviewed against TD's E&S Non-Retail Credit Risk Management Process, which includes the Equator Principles[1] (100%)	Met[2]
	Meet our commitments as a signatory to the UN Principles for Responsible Investment	Met[2]
Insurance	Meet our commitments as a signatory to the UNEP FI Principles for Sustainable Insurance	Met[3]
	OPPORTUNITIES	
Lending and Investment	TD's contribution to supporting the low-carbon economy ($100 billion (USD $78 billion), in total, in low-carbon lending, financing, asset management and internal corporate programs by 2030)	Over $43 billion as at October 31, 2019
	Green bonds ($ issued)[4]	US$1 billion issued in 2017; no new issuance in 2019
	Green bonds ($ underwritten)	Over $21 billion in TD's participation in green bond underwriting since 2010[5]
	Green bonds ($ purchased)	$1.3 billion as at October 31, 2019; $340 million purchased in 2019
Insurance	New climate-related insurance products	Launched extended water damage coverage
Operations	Energy and GHG reduction initiatives (By 2020, zero increase in absolute energy use relative to 2015 baseline)	See 2019 ESG Performance Data Appendix
	Internal price on carbon ($/t$CO_2$e)	$6
	Be carbon neutral (Maintain Carbon Neutrality)	Met
	Scope 1 and 2 GHG emissions (By 2020, zero increase in absolute scope 1 and 2 GHG emissions relative to 2015 baseline)	21% reduction in scope 1 and 2 relative to 2015 baseline
	Scope 3 GHG emissions	See 2019 ESG Performance Data Appendix

UPCOMING PRIORITIES

As our activities advance, the metrics and targets we use to monitor our success will likely evolve as well. Through our participation in industry groups, we intend to continue developing appropriate metrics that can be adopted consistently by financial institutions to provide comparable, decision-useful information to investors.

1 https://equator-principles.com/
2 https://www.td.com/document/PDF/ESG/2019-TD-ESG-Appendix.pdf
3 https://www.td.com/document/PDF/ESG/2019-Principles-for-Sustainable-Insurance-Annual-Disclosure.pdf
4 https://www.td.com/document/PDF/ESG/2019-Green-Bond-Use-Proceeds.pdf
5 Apportioned value of TD green, social and sustainable bond underwriting, inclusive of TD's green bond issuances.